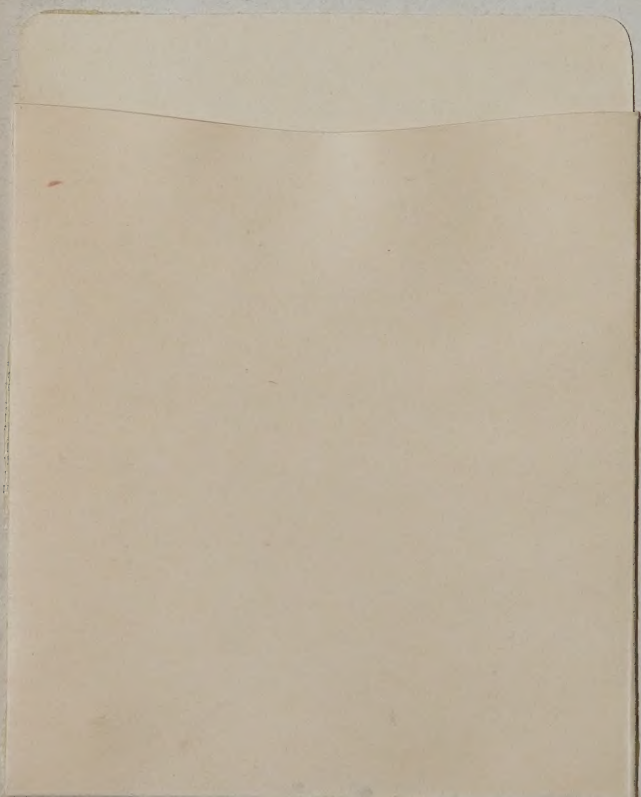




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THE  
ARCHITECT.

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A WEEKLY  
ILLUSTRATED JOURNAL  
OF  
ART,  
CIVIL ENGINEERING,  
AND  
BUILDING.

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*"Architecture rises so high as to command its other two sisters, and to be almost necessary for their perfect existence."—WISEMAN.*

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# THE ARCHITECT

## A JOURNAL OF ART, CIVIL ENGINEERING, AND BUILDING

### TECHNICAL EDUCATION BY GUILDS.



WO very remarkable governmental reports are before the public just now; and, although both are of such unusual gravity that they must be expected to fly over the heads of most of us, yet neither of them can fail to be studied by a large number of special readers, whilst those who are content to take them up less attentively in the form of the abbreviations given by the press may no doubt be spoken of as a very considerable proportion of the people at large. These documents, we need scarcely say, are,

first, the elaborate report, the second of a series, upon the subject of technical education, and, secondly, the equally exhaustive statement regarding the property of the old trade Corporations of the City of London. It may, at least, serve to point a moral as well as a paragraph if we say that the one deals with that most momentous question of the day, how to elevate the standard of specialist instruction for English artisans, whilst the other indicates the singular story of the accumulation of specialist funds for the promotion of guild-action in English manufacturing and trading industries, and the diversion of their revenues to strange purposes.

We do not propose to recapitulate now in any way the interesting information which is brought out in these two reports, but rather to suggest a line of thought, in relation to both of them, which, if it has not been wholly overlooked, has certainly not yet been allowed to acquire that prominence in discussion which we think there are many, especially of those who are connected with the more artistic branches of business, who may be inclined to think it deserves.

To begin with a plain proposition, we would ask the question why the always powerful agency of guild-action should not, amongst other measures, be made the subject of direct revival. If the Livery Companies of the ancient City of London have ceased to represent guild-action even in name, why should we not substitute for them new Livery Companies of the modern Metropolis, which, not only in name but in deed, shall answer to the urgent call of the working nation in these days for just that sort of furtherance of its industries which it is the reproach of the City Guilds that they have not in recent times occupied themselves in promoting? To take certain illustrations, let us point to the Goldsmiths' Company, the Merchant Taylors' Company, and the Fishmongers' Company. In the absurd condition, almost a mockery of their ancient aims, into which these Corporate Guilds have subsided—all being extremely wealthy, extremely hospitable, and little else—it is notorious that the chief public function of one of them is to give dinners to the Tories and that of another to give dinners to the Whigs; we do not at the moment care to remember what order of men it is who eat the turtle and venison of the third. But suppose the Goldsmiths' Company, in the first place, could be reorganised so as to rely chiefly upon the membership of the ornamental workers and their traders throughout London, or even throughout England, in gold and silver, brass and bronze, jewels, and the like; and suppose that such a body were led to establish a great guild, having for

its primary purpose the cultivation of artistic taste and refined craftsmanship in connection with the various departments of such exquisite business; need we inquire whether this is not exactly what the circumstances of industrial England at this moment demand? Preparatory schools, technical schools, advanced scientific schools, commercial societies, artistic societies, museums, laboratories, all suggest themselves readily to the fancy; and it is not too much to say that, with English money and English dexterity, a very moderate amount of exertion might place the cause of the highest artisanship, in these charming provinces of its wide dominion, in a state of prosperity which no other form of combination could accomplish, and which without combination it is hopeless to look for.

Turning next from the subject of artistic workmanship to such more strictly commercial manufacture as the Company of Merchant Taylors may be taken to represent, here again we cannot help inquiring whether a new and enlarged guild might not be made exceedingly useful in connection with the very extensive and important branches of English artisanship which deal with cloths and kindred fabrics. The most casual observer of the phenomena of London streets must have noticed within the last ten or fifteen years how largely the number of agents for provincial and foreign manufacturers of this class has been and still is increasing. Although we do not profess to have any right to speak of this particular trade, it seems not unreasonable to suppose that the interests involved must be rapidly developing. If so, then the considerations connected with advanced intelligence and skill must be becoming more and more urgent in their demands for the united action of experts in the direction of commercial and scientific education and an interchange of technical inquiry and opinion; and for this, we say, guild-action must be the most favourable agency.

Nor do we pause in accepting, thirdly, the wealthy Fishmongers' Company as representing still another form in which guild-action might be made of immense service to the commonwealth. Here, of course, we are still more out of our professional field; but if even only a part were true of what has of late years been laid before the public in reference to the urgent need for a practical application of science and scientific organisation to the great department of national industry here in question, it must be almost unnecessary to suggest whether the foundation provided by the obsolete City guild might not be built upon, in this as in other cases, so that the highly useful element of guild-action might be re-established in modern form to meet modern needs.

But we may rest content with the general application of these more notable examples, and now turn to our own more favourite province, the truly noble field of building and structural decoration, which employs so large a proportion of the population in its service, and awakens so gracious an interest in almost every member of the community. So far as we know, the City Livery Companies connected nominally with such industries are comparatively weak and poor, but still the importance which they might be made to assume in the world of English artisanship no one will deny, and we will therefore venture to suppose a great building guild to be established by the help of some such general rearrangement of funds as would no doubt be more or less necessary for the reorganisation of various other guilds besides. Here again the same proposals have to be offered for the application of guild-action to tech-



nical education, but happily the precise forms and purposes are already well understood, and the actual work is going on in all parts of the country, although frequently under disadvantages. We need not observe that it is in this species of artistic study, taken broadly, that the Government has been chiefly operating, and that the local schools of design are doing their work diligently. But even in a department like this it seems fair to argue that guild-action would be better than State-action. We hear a good deal just now about the comparative merits of localisation and centralisation, but if there be one thing more than another with reference to which the benefits to be derived from centralised organisation must be recognisable by everybody, it is the specialist cultivation of technical knowledge and skill. The time is long gone by since the inauguration of the system of Great Exhibitions put a stop once for all to the affectation of sedate secrecy with which here and there an old-fashioned house of business might flatter itself into the belief that the world was not able to move without its permission. It was surprisingly soon discovered that, when all the world began comparing notes, the question that arose was, not how to confine and localise, but how to extend, expand, and embrace enough, how to be sufficiently comprehensive and sufficiently centralised. The Government schools of design are based upon this idea, comprehending in their action the largest accessible circumference, and concentrating their administration upon the simplest governing authority. But it is considered to be one of the leading faults of the South Kensington system that this concentration or centralisation always focuses in a red-tape-tied governmental bureau, and never seeks in guild-action the vitality, or particular technical intelligence, which that alone can supply. What would the Royal Academy be if it were placed under the control of a department of the Government? What, therefore, might the public schools of art and science become if they were administered by national guilds of the artistic and scientific craftsmen of this great commonwealth of industry?

The two points we submit are these—that the next step in English industrial progress ought probably to be the institution of national guilds for technical education and culture; and that it might perhaps be well to utilise the old City guilds, and of course their revenues, in the establishment of these as their modern successors. The readiness with which several of the ancient livery corporations have of late come forward spontaneously for the endowment of technical schools proves two things—first, that they still possess a corporate instinct or conscience which takes this direction; and, secondly, that their public spirit may still be relied upon. We do not take the liberty of dictating to those who have the case in hand either on one side or on the other, but we cannot help thinking that we have suggested a way of dealing with a great and interesting problem which is better than the adoption of measures which would divert to outside aims, no matter how good in themselves, funds which in their own original object have a special purpose to serve whose promotion is one of the most urgent demands of the day.

## FIRST IMPRESSIONS OF GLASS-MOSAIC.

By LEWIS F. DAY.

IT is only in its place, and, moreover, in the mass, that glass-mosaic is seen to advantage. It is, therefore, not until he gets as far as Italy that an Englishman can form any true conception of its decorative value, and then it is a sort of revelation to him. But it is only by degrees that the message of colour is revealed, presuming him to travel by the ordinary route, which a novice does well to follow; for by going off the beaten track he sacrifices time and comfort to worse than no purpose. In the frequented cities there is more to see, and more worth seeing; he cannot by any possibility exhaust the mines of art. Everywhere he may have the gratification of digging out his own examples, prized the more because they were obscure.

The first impression produced by mosaic such as that one sees, for instance, at Milan, in the church of St. Ambrogio, where there is a half-dome of early mosaic, is that it is hideous. Again, in the church of St. Lorenzo in the same city there is a chapel not so much decorated as disfigured by mosaic, in which, if there was ever any colour, the colour has gone, leaving a blackness certainly not beautiful. One begins

to think that the Philistine is right, and that the boasted permanence of this mode of decoration is its crowning sin. No one would contend, of course, that such mosaic as this has any claims to other than archaeological interest. But even in such important instances of decoration as that of the dome of the Baptistery at Florence, the perfection of the mode is not very apparent. The glory of the art is not yet revealed. You are rather impressed by the solemn gloom of the interior. It is only on a very sunny day at noon that the design is completely visible; and even then one has to persuade one's self into the belief that it is beautiful either in colour or design. The effect is generally at the best sober, even to dullness; and it is only in that section of the dome immediately facing the open door, and in the soffits of the windows, which catch the light of the sun, that you get any glint of gold, to say nothing of that golden glory which is so characteristic a charm of mosaic.

Yet even here, in the decoration of the apse, one begins to suspect what possibilities there may be in mosaic; and, again, in the arabesque, which covers the upper portion of the dome, compared to which the figures below are dull and colourless. It is doubtful if even more light would reveal colour in these subjects; but it would be rash to say what might not be brought out by brilliant illumination. It will explain how little the mosaic impressed me if I say that the inlay of the pavement, simple as it is, struck me as eminently more satisfactory decoration in its way. It is that I carried away in my recollection of the baptistery, not the mosaics of the dome.

When we arrive at last at Venice, the glory of the art dawns upon us. No one in the slightest degree gifted with the perception of colour fails to be impressed with the gorgeousness of the interior of St. Mark's, and no one who cares to analyse the source of his delight can fail to see that it is very greatly dependent upon the mosaic decoration of walls and vaults. To inquire still further into the cause of this overpowering splendour is to discover that it is mainly to the glory of gold that the effect is to be attributed. Everywhere a ground of gold is adopted, for pictures and ornament alike; and, more, the decorative value of the mosaic appears to be in direct and exact proportion to the mass of this golden ground. Some of the later pictures, with their closely-packed figure groups and pictorial accessories, fail altogether in effectiveness; whilst the stiff and archaic figures of Byzantine character, which are in themselves not beautiful either in design or colour, form the most magnificent decoration. Happily, the golden ground prevails. In the best work the colour is never more than as one to three in proportion to the gold. In many instances as much as five-sixths of the surface is of gold, so slightly do figures and ornament encroach upon it. Had this golden ground been simple gilding there might have been too much of it; but there is a quality of its own about this brilliant but broken surface, where every variation in the angle at which the cubes are set tells, so that the very irregularity prevents anything like monotony of colour. In the lightest spots there are tesserae which do not catch the light; and in the shade are corresponding ones which sparkle unexpectedly and light up the shadows. It is this unexpectedness, resulting from the uneven, broken surface of mosaic, that gives it its most charming characteristic; and it is in the gold more than in the colour that this charm is to be found. It must be confessed that even at St. Mark's the draperies of the early figures are still too even in colour, and that the variations of tint which do occur are often much too sudden. That is to say, the shadows of the draperies are mostly too heavy and the high lights too white, whilst heavy shadow, high light, and intermediate local tint, are each in themselves too flat. This may be due in part to the effect of time upon the work, or to restoration; in either of which cases the boasted permanence of mosaic is not all that it has been vaunted. However that may be, one has a right to expect, in a medium which lends itself to such fascinating variation of tint, something more of variety and beauty of colour.

Leaving Venice with a very distinct impression of the predominant value of gold in mosaic, the first sight of the churches of Ravenna is a second revelation, not less wonderful nor less impressive than the first. From church to church your wonder grows, until you realise at length all the possibilities of colour that lie in the hands of the mosaicist. The value of the gold ground is too obvious for the Ravennese artists to have ignored it, and they have adopted it freely, as, for example, in the baptistery of St. Maria in Cosmedin, where the dome is decorated with figures of the Apostles, draped in



white, on a gold ground. But even in this white and gold there is more colour than in similar Venetian work. Here the folds of the drapery are not preternaturally pronounced. Instead of heavy shadows and forced high lights, there is a silvery or pearly tint pervading, and altogether a delicacy of effect that one had not been led to expect in mosaic.

In the decoration of the dome of another baptistery (*the Baptistery*) a very similar design has been adopted, but this time on a coloured ground. The Apostles are represented again in white and gold, but on a lightish and brightish blue background, the space between them broken by arabesque ornament in gold. Above are suspended pearly white curtains, which hang from the rim of the central medallion, and form a sort of pattern about their heads. They tread the green earth in a rather active, not to say violent, manner, in which is no suggestion of conventional stiffness. Below all this is a rich frieze of architectural and emblematic design, connecting the pictured dome with the lower walls. These are decorated with very beautiful foliated scroll work in olive and gold on a deep indigo blue ground, in the midst of which are occasional medallions, with panels in white, on a ground of gold. Here, indeed, is colour as beautiful as one could wish. In the gold it appears that two kinds are used, the one more coppery than is usual.

The mosaics of the church of St. Apollinare Nuovo, which, like those at the baptistery of St. Maria in Cosmedin, are said to date from the sixth century, are like them in delicate colour on a gold ground. The nave is one mass of mosaic. Here, again, the figures are designed in processional order; on the south side a series of saints, on the north a band of virgins, twenty-two in number, all in white and gold on a golden ground. There is no confusion resulting from this pervading gold, for the golden draperies are distinguished from the ground by being diapered with delicate patternwork in colour, which gives a glow to the metal. The effect is sometimes as of variously-tinted gold.

The individual figures are separated one from the other by palm-trees, the trunks of which give valuable vertical lines in the composition, whilst the fronds diaper with sprays of green the space "to let" above. The plain gold nimbus about the head of each is edged with a rim of white and red. The grass about their feet is green, the whole resulting in a general effect of green and white and tinted gold, singularly pure and bright and beautiful. The corresponding male saints are less interesting.

In the decoration of the chapel of the Episcopal Palace a blue ground occurs again; and there is also an instance of a figure with golden drapery, shaded with brown, on a ground of gold, the effect of which is excellent, and not in the least confused. In the mausoleum of Galla Placidia the greater part of the mosaic is on a deep blue ground. In the diapering of the vaulting the pattern, as rich as it is bold, is all in pale blues and greens on deep blue, with only a small amount of gold introduced. The scrolls in gold are very bold and strong in design, and the borders, whether of geometric or foliated design, are equally happy. One of these borders consists of a wreath of foliage and fruits in colour, on a ground of white. The golden ground of another (fret) border is made up of alternate tesserae of gold and golden-brown.

Beautiful as these mosaics are, they are not richer than those at St. Vitale, where the entire effect of the choir is one of exceeding splendour. Here is, indeed, a depth and fulness of colour almost beyond conception—quite beyond description. Very noticeable is the abundance of rich dark blue and brilliant green, the latter occasionally being adopted for a background; as in the cupola, whose four divisions are decorated with scrolls alternately of green on gold and of gold on green, on the principle of counter-change. Some of the richer panels are framed in borders of subdued tints, where the colour is confined, in fact, to simple combinations of black and white and Indian red, forming a perfect foil to the gorgeous pictures and patterns they enclose.

Of the design of these mosaics it is not my purpose to say much, though, indeed, they might be taken as the text for a discourse on decoration, and more especially of dome-decoration. A certain quaintness is to be observed in some of the figures, but seldom anything like stiffness. On the contrary, there is a surprising breadth and freedom about the design, and an equally unexpected absence of the bogey-like attributes common to Byzantine figure work. The medallion heads of virgins in the chapel of the Episcopal Palace seem as

if they might fairly represent so many ladies of the eleventh century. Architectural accessories are represented sometimes in a manner that is naïve, but not otherwise than decorative. Foliage, such as that of the vine, is drawn almost naturally in some of the scrolls; the arabesques are vigorously designed; the diapers are varied and interesting; and the monotony of ornament is relieved by the judicious introduction of birds, animals, and other creatures, which serve at the same time some symbolic purpose also. And though the examples range over a period of some six or seven centuries, it is not very apparent to the mere artist which examples belong to which date. Occasionally one recognises an early instance, but only an antiquary could honestly pretend to determine at once from internal evidence the precise period to which the various mosaics belong. For my own part, I confess that I was content to take what the guide-book says for granted on that score, and confine myself to the study of their artistic merits.

Whilst on the subject of confession, I may admit that my silence with regard to the mosaics at St. Apollinaire in Classe is due to the fact that I did not get out to see them. There is so much to see in Ravenna, and the hotel accommodation is so little inviting, that I succumbed to the cravings after wholesome food, and left that much unseen. All the same, I hope to go again some day and revive my impressions of these masterly decorations. It is a joy to see them. It is not even as at St. Mark's, where the grandeur of the whole so impresses you that it is long before you can descend to the critical examination of details. At Ravenna the interiors are so many gems, set before you to see and to enjoy; and, if you are of that mind, you have only to look and learn.

## THE BRITISH MUSEUM.

THE annual reports of the officers of the British Museum have been published this week. The principal librarian says that the removal of the natural history collections to the new museum in Cromwell Road having been completed, the rooms in Bloomsbury in which the zoological collections had been exhibited have been applied to the accommodation of the departments remaining there. This has enabled the keeper of the department of Oriental antiquities to make a more extensive exhibition of Egyptian objects of various characters in a system of instructive classification: the ancient vases and terra-cottas, the bronzes, and the ancient paintings have been rearranged and more fully displayed by the keeper of Greek and Roman antiquities; British and Mediæval collections have been placed on exhibition; the glass and porcelain collections have been brought together in one room; and an extensive ethnographical collection, including the contents of the Christy Museum, transferred from Victoria Street, is in process of geographical arrangement in the long gallery formerly occupied by the collections of birds. In the gallery lately occupied by the British Zoological collection, coins and medals of all countries, together with photographs of drawings of the old masters, and of early engravings of the Italian and Flemish schools, have been exhibited. Instructions have been given to keepers of departments to put aside duplicate objects and specimens for the formation of a collection to be lent for exhibition in the provinces.

Owing to the refusal of the Porte to renew the firman under which excavations for antiquities have been carried on since the year 1873 in Assyria and Babylonia, these works have been discontinued; and, with the assistance of Her Majesty's consuls at Mossul and Baghdad, arrangements have been made for protecting as far as possible from encroachment the sites opened in the neighbourhood of these cities, including that of the ancient city of Sippara, only partially explored, but with important results. A subscription fund having been raised for renewing excavations on the site of the Temple of Diana at Ephesus, under the direction of Mr. J. T. Wood, the trustees of the Museum have consented to his occupation of the site for this purpose, and the work of excavation has been proceeded with.

During the year 36,046 volumes and pamphlets have been added to the library (including books of music and volumes of newspapers), of which 2,692 were presented, 10,612 received in pursuance of the laws of English copyright, 1,474 received under the international copyright treaties, and 20,350 acquired by purchase. Also 47,605 parts of volumes (or separate numbers of periodical publications and works in progress) have been added, of which 1,091 were presented, 25,664 received in pursuance of the laws of English copyright, 709 received under the international copyright treaties, and 20,141 acquired by purchase. The number of sets of newspapers published in the United Kingdom and received under the provisions of the Copyright Act during the past year has been as follows, viz., 390 published in London and



its suburbs, 1,117 in other parts of England and Wales, 179 in Scotland, and 150 in Ireland: 58 volumes, belonging to 21 different sets, have been purchased; and 1,608 numbers have been presented. In addition 6,378 pieces of music have been acquired, each piece complete in itself, of which 3,314 were received by English, and 2,620 by international copyright, and 444 by purchase.

The Stowe Collection of MSS., the purchase of which from the Earl of Ashburnham was sanctioned by Parliament at the close of last session, consisted of 996 volumes and sets of volumes, as numbered in the catalogue. Of these, 95 numbers, viz., the MSS. in the Irish language, and certain volumes specially relating to Ireland, were, by order of the Government deposited in the library of the Royal Irish Academy in Dublin, the rest being assigned to the British Museum. Among the collections relating to English history are:—Forty-two Anglo-Saxon charters, dating from A.D. 693 to the eleventh century; a wardrobe book of Edward II., 1322–1323; wardrobe and jewel accounts of Elizabeth; correspondence of Sir Thomas Edmondes, Ambassador in France and the Low Countries, *temp.* Elizabeth and James I., in 12 volumes; correspondence of Arthur Capel, Earl of Essex, Lord Lieutenant of Ireland, *temp.* Charles II., in 25 volumes; correspondence of the Court of Hanover with political parties in England, early in the eighteenth century, in 10 volumes; letters of the Duke and Duchess of Marlborough to Secretary Craggs; various diplomatic and literary correspondence; minute-book of the Privy Council, 1661–1670; and several separate documents and letters of interest. MSS. of value for English literature and topography are:—A Latin Psalter with Anglo-Saxon glosses of the eleventh century; the register of Hyde Abbey, Winchester, with finely-executed drawings by an English artist of the eleventh century; a volume of English homilies, of the end of the twelfth century; Lives of Saints in English verse, of the fourteenth century; Gower's "Confessio Amantis," fifteenth century; and several chartularies of English monasteries, from the twelfth to the fifteenth centuries, including the Boldon Book of Durham, a register of St. Thomas, Southwark, and a corporation register of Winchester. There are also several heraldic MSS., comprising the collections of Anstis, Garter, and various county visitations.

The department of prints and drawings has been presented with 965 examples. Among them are five separate donations by Mr. R. P. Cuff, of his own engraved works, amounting to 134 prints, and including interesting proofs of the illustrations to Ruskin's "Modern Painters," "Stones of Venice," and "Seven Lamps of Architecture;" views of the Houses of Parliament; the interior of the building erected for the Exhibition for the Industry of all Nations, 1851, &c. Five donations by Mr. J. Deffett Francis, consisting of twenty-four prints and drawings, and including a large study by Richard Cook, R.A., for one of his illustrations to Scott's "Lady of the Lake," together with the pencil drawing of the same subject executed for the engraving, and a proof of the plate engraved by Cosmo Armstrong, which has sketches by Cook in the margin. A collection of finished drawings and sketches, 294 in number, executed by Charles Alfred Stothard, for his work "The Monumental Effigies of Great Britain." Thirty drawings of Hindoo gods, from working drawings in a temple in Ceylon, presented by Andrew Nicoll, R.H.A. "Impressions from a collection of wood-blocks used in the printing of chap-books, children's books, &c., in York, Leeds, Hull, and other towns of Yorkshire, during the last and the first half of the present century. Privately printed 1870," presented by Mr. W. J. Linton. The cast of Shakespeare's face, taken after death, engraved on wood by W. J. Linton from a drawing by W. Page. Fifteen etchings by Professor A. Legros. A tracing of the earliest wall painting known to exist in Japan, dating in all probability from the seventh century of our era. Among the purchases are a very fine and extensive collection of Chinese and Japanese drawings and paintings brought together by Mr. W. Anderson, 128 examples of the Italian school, 544 of the German school, 59 of the Dutch and Flemish schools, 354 of the French school, and 277 examples of the English school.

Mr. Newton in his report says it is much to be regretted that no provision has yet been made for the exhibition of the sculptures still withdrawn from public view in the sepulchral basement. This collection, which contains part both of the Elgin and Towneley marbles, has already suffered much from exposure to the foul atmosphere of the basement; and the detriment to the surface of the sculptures will be aggravated year by year till a proper room is provided for their exhibition.

Among the acquisitions in his department are six ancient mural paintings, representing (1) Pluto carrying off Proserpina in a quadriga; (2–3) two groups of a male and a female figure; (4) a winged female figure holding a branch; (5) a male figure holding a *calathus*; and (6) a flower. These paintings, which originally decorated the tomb of the Nasones, discovered on the Via Flaminina in 1674, had been lost sight of for more than a century, until they were purchased at a sale by Mr. George Richmond, R.A. They are remarkable for free and vigorous drawing, and for the rich and mellow tone of their colouring. They formed part of the series of paintings which is engraved in Bartoli, "Pittura antiche del sepolcro dei Nasonii," published 1680.

## THE BELGIAN SYSTEM OF ART EDUCATION.

A PAPER was read on Saturday, at the City and Guilds of London Central Institution, by M. de Taye, Director of the Academy of Fine Arts at Louvain, on "Artistic Instruction in Belgium and its Applications to Industry." The author began by referring to the anxiety of all nations in the present day to develop the technical practice of trades by popularising the teaching of drawing. The late Prince Consort endeavoured to cultivate the national taste in this country, and to show that beauty must be placed before cheapness in all artistic industrial production. As Count Laborde wrote in his remarkable report on the Exhibition of 1851, "Art is the most powerful engine of industry." Of the three countries which had specially busied themselves with the solution of the problem of popularising art teaching, France had shown a subtlety of æsthetic sense, England a powerful spirit of organisation, while Belgium had proceeded with a well-considered method founded on its brilliant traditions. Describing then what had been done in Belgium, he said that in the field of primary education they had first to do away with the copy drawing which was everywhere working out its evil tendencies. Copying taught nothing. The pupil thought he had learnt to draw, but after practising in that method for four or five years he was scarcely able to represent a solid. The antidote to copy drawing was sought in drawing from the relief. In their primary schools, in order to train the eye and the hand of the pupil, they had arranged a course of freehand drawing, in which there was a direct application of the principles of plain ornamentation. This was in accordance with the method approved in Germany, where methodology had been studied with great success, and it proceeded on the lines laid down by the learned Herr Von Müller, Minister of Public Instruction in Prussia, who declared that in the Real-schule they should try not so much to make artists of the pupils as to make them understand the utility of the knowledge and practice of the language of form. After freehand drawing came the use of instruments for the expression of the more complicated geometrical forms on paper. The application to ornament being continued and developed served to prove the direct practical usefulness of the exercises. These two courses enabled the pupil to begin with advantage the study of relief—the victorious enemy of the copy. Projection was taken first, perspective afterwards, the first principles of the study of projections forming the basis to the study of the appearance of objects. From these elementary exercises the pupil passed to the drawing of solids. When, added to this, the pupil knew perfectly the characteristics of the laws of harmony and contrast in colour, he possessed quite sufficient artistic ideas to begin the ordinary work of life; and whatever profession or calling he might enter upon, that which he has thus learnt, and the familiarity with the practical notions of the language of form, would be of use to him, whether he first passed through schools of higher grade or went direct from the primary school to the workshop. In conclusion, M. de Taye maintained that the introduction of drawing in the primary schools of Belgium had increased the wealth and well-being of the working population; while by refining the taste of the nation it had proved a powerful element of progress in a moral, material, and intellectual point of view. Sir Philip Cunliffe Owen, who moved a vote of thanks to M. de Taye for his paper, expressed a hope that the wish of His Majesty the King of the Belgians to see museums, such as that at South Kensington, established in Belgium, and opened in the evenings for the benefit of the industrial classes, would soon be accomplished.

## NATIONAL COMPETITION REPORTS.

THE number of works sent up from schools of art for examination in 1883 was 226,415, from 192 schools of art and branch classes. Of these works 926 entered into the National Competition, for which the examination occupied seven days. The following are the reports of the examiners who adjudicated on the various stages of instruction submitted to them on each day.

*Drawing and Painting the Figure from the Antique and from Life; Studies of Drapery.*

(Examiners:—E. J. POYNTER, R.A.; H. S. MARKS, R.A.; W. F. YEAMES, R.A.)

The gold medal for the antique was awarded to a drawing of a faun carrying a kid, from the Hanley School of Art, of excellent workmanship and careful finish, without excessive labour, in which the spirit and grace of the original were well rendered. These valuable qualities atoned for certain faults of detail, of which the smallness of the feet and defective drawing in the left arm were the most noticeable. An extra gold medal was given for a drawing beyond the prescribed size submitted from the South Kensington School of Art.

The gold medal for the study of the figure from life was also awarded to a student of Hanley School of Art for good and accurate drawing and careful finish of a graceful and easily-posed figure.



In many drawings and paintings of the figure from the antique and from life the examiners observed an incompleteness in representing the extremities. Some studies of the figure from life were made from models of defective development and manifestly disproportionate limbs. Such examples are misleading, and the master should make every effort to obtain better models for the students. As this is in some places a matter of difficulty, such studies should be supplemented by work from good casts taken from well-formed natural subjects. The student training his eye to see correct proportion in such casts would avoid a failing which is usual, namely, exaggeration of disproportion, whereby the student may try to obtain what he considers to be individuality in his work.

The competition for the gold medal offered for paintings of drapery was limited to a very few studies, the best of which, from Nottingham School of Art, was rewarded with a silver medal. The examiners would desire to see a greater number and better studies in this stage. Paintings of the antique figure in monochrome were fewer in number and poorer in quality than on previous occasions.

*Modelling the Figure from the Antique and from Life, Details, Designs, &c.*

(Examiners :—E. J. POYNTER, R.A. ; J. E. BOEHM, R.A. ; W. F. YEAMES, R.A. ; H. THORNYCROFT, A.R.A.)

The number of works submitted was above the average. Many, however, were very poor in execution, and should not have been passed by the masters of schools as specimens worth sending up for examination. In future none but works in plaster will be admitted as eligible to compete for the gold medal. The majority of figures modelled from the antique were from the *Hercules with the Apples*, the muscular developments of which were absurdly exaggerated in some of the studies. A book prize alone was awarded in this stage. This antique figure is scarcely one to be recommended for the use of students. Its mannerisms are apt to be misunderstood. The gold medal for modelling the figure from the life was awarded to an admirably expressed semi-recumbent figure from the South Kensington School of Art.

The models of heads in many cases lost value from want of careful study and thorough workmanship. As a rule, the chief attention had been paid to the face alone, to the neglect of the neck and the back of the head. Others which gained awards were modelled from subjects lacking distinction of form. Higher awards in these cases were withheld because the students had not attempted to carry out their works with that delicacy and refinement of execution to which moist clay so especially lends itself. Still, it is worthy of notice that in a few models from the nude, especially those by students at the South Kensington schools, action was well felt and expressed, and this imparted interest to the work. Greater attention should be given to the modelling of extremities in studies from the figure, and in models of foliage, &c.

A gold medal was awarded to Sheffield School of Art for a pair of admirably modelled wax panels designed for cast metal work.

A few beaten and engraved metal works and carved wooden chairs were submitted. It should be understood that such works are considered merely in respect of their design and modelling, and not for merit in respect of technicalities in process. In future, articles of furniture, like chairs, should not be sent up to London for examination.

An imperfect acquaintance with the rules which regulate the arrangement of mouldings and other details was noticeable in almost all the modelled designs for doorways submitted for the Plasterers' Company's prize, and the highest award in this stage was a silver medal.

*Architectural Designs and Drawings.—Studies of Historic Ornament.*

(Examiners :—E. J. POYNTER, R.A. ; G. AITCHISON, A.R.A. ; J. J. STEVENSON.)

The gold medal was awarded for a set of designs for a cathedral from Lambeth School of Art,\* and a silver medal was given for a set of designs for school buildings and chapel from the South Kensington School.

The design for a cathedral was mainly noticeable for the width of its nave opening into the larger square covered by the dome. The angle piers of the transepts projected so little that they hardly intercepted any of the view, and the cupola was not too high above the pavement to be well and easily seen, while its form kept pure, showed that the author had grasped the idea of what was wanted and carried it out.

The designer of the school buildings and chapel had fairly considered the subject, and well-proportioned some of the parts and well-balanced their filling in. He had also carefully drawn and neatly finished the whole set. Both these sets of drawings were well executed and thoughtfully carried out in detail. The latter, though not quite up to the standard which should have gained it a

gold medal, was thoroughly studied as regarded its requirements, and was of more practical value to a student than the first-named set of designs for a cathedral.

*Designs for Textiles, Carpets, Lace, Silk, Printed Muslins, Cottons, Woven Hangings, for Pottery, for Tiles, Mosaics, &c.—Studies of Flowers for Ornamental Arrangement.*

(Examiners :—E. J. POYNTER, R.A. ; WM. MORRIS ; W. CRANE.)

Silver medals were awarded for two good adaptations of Persian designs for carpets. The imitation was, however, very close, and the study of the original examples has been directed to the details of form and colour rather than to the adaptation of the general principles which regulate the harmony of Oriental carpets to patterns requiring some invention on the part of the student. There were many instances of mixture of geometric and naturalistic plant forms and flowers which produced abrupt contrasts. The examiners remarked that students who submit designs for carpets do not always comply with the rule requiring them to execute a portion of the design to full size upon squared paper. This omission acts to the prejudice of the students, and masters of schools of art should, as far as possible, prevent its recurrence. One design, for instance, which seemed to show more originality than the others, had to receive a lower award in consequence of this omission.

The number and quality of designs for lace were below the average. A silver medal was given for a design for Devonshire lace from the Exeter School of Art, showing originality in spite of some awkwardness in the arrangement of leading forms. As regards the class of designs, especially from Nottingham for machine-made lace curtains, the examiners observed an almost stereotyped scheme of ornament, involving a broad border and an inner area of lavish pattern. In future it is desirable for students to draw to full scale a portion of the patterns for lace curtains they send up. The study of flat Flemish pillow lace of good scroll pattern is also recommended to the designers of this class of goods since the mechanical imitation of the raised and compact work in needlepoint laces does not appear to have reached as successful a standard as that of the imitation of flat pillow-made laces. The designs for hand-made laces were not as good as in previous years.

In the class of designs for woven silks the designs rewarded showed an advance, and a gold medal was awarded to the Macclesfield School of Art. The styles of the late seventeenth and eighteenth centuries appear to have been too exclusively studied and over closely imitated.

The examiners considered that the designs for tiles, for which the gold and a silver medal were awarded, were far above both the ordinary trade patterns and the designs usually sent to them for examination. They showed remarkable taste in the selection and treatment of colour, and in the case of the design for which the gold medal was awarded the construction of the pattern for repetition was well worked out.

As usual, the studies in stages 14a and 22a combined were numerous ; but botanical analysis—that is to say, the dissection of plants or the mere diagrammatical treatment of plant forms as hitherto practised—does not in any way tend to give the student an appreciation of their characteristics for decorative purposes. The examiners advise, therefore, that it should be discontinued and the study of flowers and plants directed to the understanding of their beauties of form and colour, and their suitability for ornamental treatment and for their necessary adaptation to that end.

The examiners were surprised to find that the important class of designs for printing upon cotton and other fabrics was scarcely represented, and that the few examples sent up were, with one exception, the silver medal award to Manchester (Cavendish Street) School of Art, very indifferent.

*Designs for Wall Papers, Furniture, Metal Work, &c.*

(Examiners :—E. J. POYNTER, R.A. ; WM. MORRIS ; W. CRANE.)

The examiners were pleased to find a distinct improvement in the use of colours for wall papers, and a gold medal for a set of designs for wall papers and furniture coverings was given to Leicester School of Art. On the other hand, they felt that, having regard to its widespread manufacture, the absence of designs for furniture was conspicuous.

In the section of metal work a silver medal was awarded for a frame in the Renaissance style, though it showed the characteristics of a style more adapted for carving in wood than for beaten metal work. Amongst the designs for cups, vases, tazzas, centre-pieces for tables, and such like, there was a fair average of good execution, but a too exclusive resort to a well-worn style more suitable to architectural sculpture than to such comparatively small articles.

*Painting from Still Life.—Flowers and Monochrome Studies of "Tone" and from Casts, &c.*

(Examiners :—E. J. POYNTER, R.A. ; G. D. LESLIE, R.A. ; W. F. YEAMES, R.A.)

The competition of paintings from still life was remarkable for the amount of good work which it brought together. Examples in

\* This award was subsequently withdrawn, as the drawings were not wholly executed in the school.



which coarse treatment was noticeable, as in works of previous years, were fewer in quantity this year. The excellence of the realism, so marked a quality of the large studies done by the students in training and national scholars of the National Art Training School at South Kensington, appears to the examiners to have been carried so far as almost to counteract the practical utility which such realism in painting can be to decorative art generally.

The gold medal was awarded to a painting, from the Brighton School of Art, of some tiles, antique bronzes, and a bulrush tastefully arranged before a background of Assyrian sculpture. The qualities of the different materials in this composition were correctly imitated, although the background had an artificial appearance; the method of painting was thoroughly sound.

In the class of water-colour paintings a gold medal was given for a work, from the Hull School of Art, of very high technical completeness, painted, however, from a group of not very well-chosen materials, the inharmonious effect of which was increased by somewhat awkward arrangement. The examiners' previous remarks as to realism apply with special force to this water-colour painting. The Female School of Art, Bloomsbury, gained the rather exceptional award of a gold medal for water-colour painting of flowers and fruit without background, which class was well represented.

In the useful stage of monochrome painting of ornament from the cast many awards were made. But one work for study of "tone" carried out the views which the examiners had when they recommended this branch of art study in their reports upon the two last national competitions. A bronze medal was given for this work, which came from the Birmingham School of Art.

#### *Mechanical Drawings and Drawings from Measurement.*

(Examiner: Professor UNWIN.)

A silver medal was awarded for a set of three drawings, from the Dundee School of Art, of a complicated piece of machinery showing exceptional power of accurate projection and very artistic feeling in the rendering of the work. A bronze medal was awarded to a set of drawings of machine construction from the science class, College Street, Swindon, which were of a good style for working drawings. The lining was clear and sharp, and sectioning and colouring were good. A national book prize was given for a set of twenty drawings of building construction from Peterborough (Class No. 2,694) by a young student whose progress appeared to give evidence of attention to careful instruction. Many of the drawings were executed with extreme neatness. The set, which embraced brick, timber, and metal details, showed care on the part of the teacher in directing this useful course of instruction. On the whole, the mechanical drawings were somewhat better than those submitted last year, but the number which could be selected for national competition was very small.

### LANCASHIRE AND CHESHIRE ANTIQUARIAN SOCIETY.

THE members of the Lancashire and Cheshire Antiquarian Society took part in an archaeological excursion to Lancaster and the neighbourhood on Saturday last. On their arrival in Lancaster, the party proceeded under the guidance of Mr. E. B. Dawson and Mr. W. O. Roper to visit Lancaster Castle, and all parts were examined from the dungeons to John of Gaunt's chair. The dungeons are underground and are entirely destitute of light, the roofs have been formed by placing cement over a wattled framework, and though no vestiges of the sticks now remain, the impress of them can be seen on examination. The mass of plaster would in time become almost as hard as stone. In these damp dens of more than midnight blackness the unfortunate prisoners were chained to iron rings in the floor. The buildings of the castle exhibit great variety of style owing to the different periods at which they had been erected, and the various modifications made necessary by their modern uses. Little visible remains of the Roman structure, for Lancaster suffered more even than the other stations from the attacks of Danes and Scots, and by the time of the Conquest was a mere village in the manor of Halton. When Roger of Poitou began to build his baronial castle, he doubtless incorporated in it as much of the Roman walls and towers as he found to be of use. From the charter he gave to the priory of his foundation, we know that the "Old Wall" was the name even then given to the remains of the Roman fortress. The Norman castle with many subsequent additions was the scene where King John received the homage of the Scotch king for such territories as he held of the Crown of England, and here John of Gaunt and his son Henry IV. held their courts. In the sanguinary struggles of the Wars of the Roses it was now in the hands of one party and now of the other, and on one occasion gave shelter to Edward IV. It has also been visited by Charles II. and by the present Queen of England, who, in addition to her other titles, is entitled to that of "Duke" of Lancaster. After a prolonged examination of the architectural and other points of interest, Mr.

W. O. Roper called the attention of the visitors to the fine Roman altar which was found when the foundations of the Shire Hall were dug. This has an inscription which shows that it was dedicated by Vibinius Lucius to the god Mars Cocidius. It is supposed that Cocidius is the Latinised name of one of the British deities which by the Roman invaders was adopted and identified with Mars. Several inscriptions to this divinity have been found at other places in the north. The Romans were not indisposed to admit foreign deities to their Pantheon, and another altar found about a mile north of the town is dedicated to the god Jalonus, from whom it is conjectured the river and town take their names.

From the castle the visitors proceeded to St. Mary's Church, the details of which were described by Mr. E. G. Paley. It is a fine specimen of the Perpendicular period, and is remarkable for having a chancel of equal length with the nave. At the east end are stalls of very beautiful workmanship. The Rev. E. F. Letts called attention to the *miserères*, with their curious grotesque carvings, and suggested that the stalls should be restored to their proper position in the choir of the church.

The village of Heysham was visited in the afternoon. The church is chiefly Norman, and has been restored without destroying its original simplicity. On the hill above it are the remains of an ancient Saxon oratory. Close by are the remarkable stone coffins, sepulchres hewn in the solid rock, and well worthy of the critical examination which they received from the antiquaries. In the churchyard there is a stone coffin and a strange "hog-backed" monument covered by rude carvings of the hunting scenes.

A meeting was held in the Amicable Library, Lancaster, in the evening, when there was an exhibition of the local charters, Corporation insignia, &c. Colonel H. Fishwick, vice-president, said that whilst there was no intention of having any lengthy formalities, yet a day so full of instruction and enjoyment, and which he hoped would be the model to be aimed at in the future, could not be brought to a close without thanking those who had enabled them to see so much of a place that was linked with so many memories of the bygone history of the county palatine. The Rev. E. F. Letts proposed a cordial vote of thanks to the local committee. Mr. J. E. Bailey, in seconding the resolution, said he would take that opportunity of making an announcement that would give pleasure to antiquaries all over the kingdom. The Duke of Devonshire had in a very handsome manner undertaken, at the suggestion of the Chetham Society, to bear the cost of the printing and editing of a work of the highest interest and importance to the Lancashire archaeologist, the chartularies of Furness Abbey. The motion having been carried by acclamation, Mr. W. O. Roper responded for the local committee, and in doing so mentioned that he was preparing for publication some extracts from the chartulary of St. Mary's, Lancaster, which was now in the British Museum.

### BUILDING IN BRADFORD.

THAT there is considerable activity, actual and prospective, in the Bradford building trade, says the *Leeds Mercury*, may be inferred from the fact that the masons have succeeded in obtaining an advance of wages, and that the joiners and carpenters are endeavouring to enforce a demand for increased remuneration. For several years there has been almost a cessation of building operations on a large scale, consequent on the depression in the staple trade following upon a period of exceptional activity, during which large blocks of warehouse and shop property were erected, and the needs of the town for some time anticipated. Indeed, so much was this the case, that some three years ago a leading architect expressed the opinion that there was sufficient warehouse property to meet the needs of the town for at least fifty years; and had it not been for the large extent of this class of property from which it has been found necessary to eject tenants to make way for town improvements, this estimate might not have proved wide of the mark. The provision of sites for two new railway stations has also done much towards reducing the plethora of business property in two central portions of the town, a large area of warehouse buildings as well as other premises having been demolished for this purpose. It is not surprising, then, that with the revival of the staple industry there should so soon ensue some improvement in the building trade. The Lancashire and Yorkshire Railway Company are at present in advance of the other companies in the work of providing additional station accommodation. In carrying out the works, various street improvements have been effected; Bridge Street has been considerably widened and the gradient decreased, and Croft Street has been converted into a wide thoroughfare, directly connecting Wakefield Road and Manchester Road. Some old "landmarks" have disappeared in the process—buildings which architecturally may never have been entitled to rank as adornments of the town, but which have had no insignificant place in its moral and material progress. One of these was the Friends' Meeting-house, and another was Zion Baptist Chapel. Wood's Mill, which stood just behind the chapel, and was one of the oldest factories within the borough, had also to be demolished. The delay experienced by travellers in getting into the Exchange Station had been a subject



of complaint for years; this was owing to the circumstance that between 700 and 800 trains daily had to pass through a narrow tunnel, which was locally designated "the Bottle Neck," and which ran under Croft Street and Wakefield Road. In the works now being completed, one of the chief benefits is that a better entrance into the station has been provided by making the permanent way for a distance of 1,250 yards sufficiently wide to admit of another line of rails, and dispensing with the tunnelling under Croft Street. The most prominent feature of the new station is the goods' shed, which is a one-storey building of the usual kind, with cellaring underneath. The shed is 300 feet square, its open glass and timber roof being divided into bays, and supported by iron girders resting on sixty iron pillars. The area of the new yard and shed inclusive exceeds eight acres, reckoning from the new bridge which connects Croft Street with Wakefield Road to the boundary, and three and a half acres are appropriated for shed accommodation. There is yet much to be done before the goods station is completed, but it is already partially in use. When that period is reached, the company will have to undertake the equally important work of constructing a new passenger station, which will occupy the entire site of the present Exchange Station and the Vicar Lane goods premises. It is understood that arrangements will be made for the Great Northern Company's trains to run into the Vicar Lane side, and the Lancashire and Yorkshire Company's trains into the Drake Street side. Extensive additions are at present being made to the goods station of the Great Northern Railway Company in Wakefield Road, which was originally built as a passenger station. The scheme for the Midland Railway Station is of a very extensive character, and the preliminary operations, which are now being pushed forward, have necessitated the absorption of the large block of shop and warehouse property lying between Kirkgate, Cheapside, and the present station. The work of demolition is now being vigorously proceeded with, as also are the other preliminary operations of quarrying and excavating the site.

In anticipation of these operations several large blocks of warehouses were some years since erected on the site of the Union Foundry in Manchester Road, adjacent to the new goods station of the Lancashire and Yorkshire Railway; and recently a successful effort has been made to meet the need for similar accommodation in the vicinity of the premises of the new Midland station by the erection of a large block of buildings at the top of Cheapside, at the junction of Broad Street with Manor Row. The buildings are in seven storeys, the height from the causeway to eaves being 68 feet. The length of the frontage to Manor Row is 150 feet, and to Broad Street 135 feet, the space being sufficient for the storage of about twelve thousand sheets of wool. The buildings are architecturally of the modern English style, without allowing business adaptations to be interfered with. Practically there are seven distinct warehouses in the block, but the whole can readily be adapted for use as one warehouse. The frontage to Manor Row is of ashlar throughout, and three arched doorways give access to the premises at this part, entrances also being provided in the other streets. Mr. Rhodes Calvert, of New Kirkgate, is the architect, and the works have been carried on under his supervision. The building is the property of Messrs. S. Feather and J. Riddihough. In the same thoroughfare, but lower down and on the opposite side, a structure almost equally imposing has been erected for Messrs. Townend, wool brokers, from designs prepared by Messrs. Milnes & France.

In various parts of the town there are building operations of another kind in progress, the most important being at Brownroyd, where Messrs. Isaac Holden & Sons are having their combing works enlarged by the addition of two sheds, the dimensions of each being 320 feet by 180 feet. The area to be covered by the new works is about seven acres. The buildings will be constructed in two storeys, and there will be a chimney sixty yards high for each shed. Sidings connected with the Great Northern Company's depôt at City Road will enable coal and other material to be conveyed direct to the works, and a large part of the yard will be roofed with glass that goods may be unloaded under cover. Generally, the new buildings which are being constructed of stone will correspond with the other portions of Messrs. Holden's establishment. It is expected that in a short time there will be begun some important building operations in connection with the Bradford Infirmary, the need for the enlargement of this institution having been repeatedly pressed upon the Board of Management, and especially during the past two years. It is intended to expend about 12,000*l.* in making this enlargement; and as not more than 2,000*l.* are available towards this, an appeal for funds will shortly be issued to the public. The nature and locality of the addition to the infirmary have formed a subject of frequent and anxious consideration; but, guided by the report of Captain Galton, the Board of Management have decided to make the necessary extension by erecting a detached wing between the eastern end of the present building and Lumb Lane, from designs prepared by Messrs. Milnes & France. It is strikingly indicative of the growing needs of the town that, simultaneously with this addition to the infirmary, the managers of the other principal medical charities find themselves under the necessity of providing more accommodation.

## STRATFORD-ON-AVON CHURCH.

A MEETING of the Stratford-on-Avon Town Council was held on Tuesday when the special report on the restoration of the parish church was discussed. The General Purposes Committee reported that they had received a resolution which had been adopted by the Restoration Committee, after consultation with the Society for the Protection of Ancient Buildings. The committee having fully considered the society's report, resolved to recommend that the fabric of the church be restored in accordance with the principles laid down in the report, and mainly following the recommendations made therein. That if sufficient accommodation can be provided on the floor for seating—say at least 1,050 persons—the side galleries should be removed, the committee recommending that all the seatholders in the galleries should, on application, have allotted to them equivalent accommodation. That the transepts be opened, and devoted to the congregation. In order to utilise the transepts, it will be necessary to remove the organ and to build a vestry. That the committee recommend a vestry be built, detached from the church, but connected with the same by cloisters, on the south side, rather than upon the site of the old charnel-house, as suggested by the Society for the Protection of Ancient Buildings. That an architect be called in to submit a complete scheme to the committee for the repairs and alterations in the church, his instructions being: (1) That the committee approve generally of the principles of the society's report; (2) that they require advice, with sufficiently-extended details and rough estimates, as to what he would propose should be done under the following heads; (3) repairs to the fabric; (4) the seating, galleries, &c.; (5) removal of the organ; (6) the vestry; (7) other work required or suggested. The committee guarantee that a fee, not exceeding fifty guineas, shall be given for such report, but in no way pledge themselves to adopt any of the suggestions to be made, or necessarily to employ the same architect to carry out the work they may decide to undertake. The Restoration Committee have selected Messrs. Bodley & Garner to furnish a detailed scheme, with estimates of the probable cost. The following resolution was adopted, "That the report of the General Purposes Committee be received, and the action of the members appointed to serve on the Restoration Committee be approved; but the Council, while generally approving of the scheme of restoration proposed, reserve their final decision until they are in possession of a fuller report, with details and estimates, to be furnished by the architects appointed by the Restoration Committee, viz., Messrs. Bodley & Garner."

## PROSECUTIONS BY DISTRICT SURVEYORS.

IN the House of Commons, in May last, Mr. Samuelson put a question, at the request of the Mansion House Council on the Dwellings of the Poor, to the Chairman of the Metropolitan Board of Works, whether, when the district surveyors under the Board took proceedings for infractions of the Building Acts, they did so at their own risk; whether the responsibility as to costs rested on them, so that if unsuccessful in the prosecution instituted, they were personally liable for the costs; and whether the Board would take steps to prevent the surveyors being thus deterred from seeing that the Acts were complied with. Sir J. M'Garel-Hogg replied that though the surveyors were appointed by the Board of Works to enforce the Building Acts, they had statutory authority to take proceedings in their own names and authority, and thus incurred the same risk as other suitors in regard to costs if unsuccessful in prosecution. On the other hand, the surveyors were entitled to considerable fees when successful in obtaining convictions, though they had to sue in the ordinary way for payment if the defendants were unable or unwilling to pay. Sir J. M'Garel-Hogg added that in cases in regard to which points of law had been reserved for consideration by a higher Court, the Board had been accustomed to pay the surveyors' costs. Mr. John Hamer, the hon. secretary of the Mansion House Council, has officially called the attention of the Home Secretary to this inquiry by Mr. Samuelson, and to the answer of Sir J. M'Garel-Hogg, observing that the Council would be glad to learn his opinion on the question, and whether he would "use his influence to procure such alteration in the law as to make the public authority responsible for prosecutions instituted by district surveyors." To this Sir William Harcourt has replied as follows:—"Whitehall, June 25.—Sir,—With reference to your letter of the 11th inst., 1884, asking for an alteration in the law so as to make the public authority responsible for prosecutions instituted by district surveyors appointed by the Metropolitan Board of Works, for the purpose of enforcing the regulations of the Building Acts, I am directed by the Secretary of State to inform you that the Building Acts will be under the authority of the Corporation of London, as proposed in the London Government Bill, who will, no doubt, take the measures they think necessary to make these Acts more efficient.—I am, Sir, your obedient servant (signed), GODFREY LUSHINGTON."



## NOTES AND COMMENTS.

THE Art-Director at South Kensington, in his notes on Italian Art Schools, suggests that the English schools should obtain casts of hands and feet from shapely models. If he wished to cite a case in support of the proposed innovation, he need only refer to the cover of the official programme of the Health Exhibition. It is adorned with a pleasing figure of the goddess HYGEIA, by one of the successful South Kensington students. But there are no less than seven toes on the right foot. One of the Royal Academicians has a cabinet, on which there is painted a figure of a harpist with six fingers on one hand, and the addition seems to impart so much energy that he would not allow the error to be rectified. But can a seven-toed foot be supposed to be more efficacious in stamping out disease than one with the ordinary number? The absurdity is easily explained. The South Kensington School continues to feel the influence of the late GODFREY SYKES, who believed that one of the surest ways of expressing energy was to make hands and feet of abnormal dimensions. The practice might be abated somewhat if the London and provincial schools possessed casts of good hands, and of feet which had not been distorted by boots.

AN exhibition of drawings by the pupils of the Board schools of London is now open in the basement of the school in Saffron Hill. It is interesting as denoting what progress is made in ordinary schools. What first strikes the visitor is the absence of system in the teaching. In too many of the schools the pupils are allowed to copy woodcuts, illuminated sheets, and hideous chromo-lithographs, and the more dexterous they become in imitation of the originals the less chance they have of acquiring skill in drawing. Other schools patronise examples which have been engraved in fine lines, and which it is almost impossible for a novice to imitate. The majority of drawings bear the signs of having been rubbed out very often, as if there was no necessity to inculcate decision. The drawings which have been taken from solid models are very few, and in too many cases it is evident that the showiness which is likely to deceive ignorant parents has been preferred to the true interests of the children. The London School Board, in their room at South Kensington, display engravings from figures by RAPHAEL and other masters, as if they were the kind of studies which are followed in schools; but in the Saffron Hill exhibition we see no copies from them. Probably they are only intended to excite the admiration of foreign visitors and jurymen.

THE School Boards of London, Birmingham, Edinburgh, and Glasgow have gone to much expense in order to exhibit their educational appliances at South Kensington. But a visit to the room upstairs which has been assigned to the Christian Brothers will make it plain to every taxpayer that the English authorities have much to learn. The Romanist teachers are far in advance of us. Their notion is that a school course is a preparation for the workshop, and they act upon it. They may be in error, but they at least gain consistency in their teaching. Looking at the examples of work from Board schools, it is impossible to say whether the Boards and their teachers ever bestow a thought on a boy's future. The Acts say nothing about the future, and, so long as the law is obeyed, what need have members and masters to give themselves trouble for which there is no recognition? Boys may come and boys may go, but the Board remains. The Christian Brothers are not so bounded in their views. They first do all that they can to prepare boys for apprenticeships, or for business, by making them acquainted with real things and processes; afterwards they assist them, as the lads grow, with advice and instruction. Thus, for example, several note-books are to be seen which are full of sketches of machines, and have been taken in the workshops. If a youth has the wish he is taught how to make the sketches, and afterwards to prepare elaborate drawings from them. It is so in other trades, and a glance round the room shows that there are chemists, builders, carvers, geologists, engravers, printers, &c., enrolled among the Brothers. Some of the work done by pupils appears to be too good for boys' hands. The demand of the age being for technical education, the Brothers have in their own way elaborated a system of training, which apparently is more complete than those which have been devised by the Governments of Europe, and their exhibits at South Kensington are worthy the attention of everyone concerned in education.

THE French architects, at their late congress, heard with applause of a project for creating a fund which will be available for the defence of the interests of architects. The entrance fee is proposed to be thirty francs, and the annual subscription twelve francs. It often happens in France as in England that an architect suffers from clients and public bodies because he is unable or is afraid to undertake the risk of law expenses. In England there is the additional annoyance to him that his Institute will take no recognition of his difficulties, however grievous they may be; but the French society is not likely to allow a member's rights to be sacrificed to the timidity of a few under the guise of dignity and the "interests of the profession in general." The funds of the proposed society will not be available unless the council can find, after investigation, that the case is one which demands their interference, and it is possible that the society may often be enabled to keep cases out of the Courts. The members will have the satisfaction of feeling that in a difficulty they will be sustained by the influence of the society, which can be exercised in other ways besides advancing money for law costs.

THE sale of the pictures from the Leigh Court Gallery corresponded with the predictions. The National Gallery acquired the two pictures by HOGARTH—which, like so many of the painter's works, preserve their freshness—and STOTHARD'S *Canterbury Pilgrims*, which is hardly equal to the reputation it has gained through the excellent engraving. The faces show uncertainty of touch, as if the painter's eyesight had been failing before this replica was undertaken. TITIAN'S *Venus and Adonis* could not find a bidder who was willing to speculate more than 1680 guineas on its genuineness, and was bought in. The *Three Graces*, which, although ascribed to TITIAN, were unlike any other work of his, were sold for 220*l.* 10*s.*, which was rather a high price for such a painting. A small head on copper—*Mater Dolorosa*—which apparently is one among many replicas after CARLO DOLCI, sold for 383*l.* 5*s.* A noble picture by MATTEO CERREZO, but which may hereafter be traced to a greater artist, realised 682*l.* 10*s.* The little panel by RAPHAEL was bought by MESSRS. AGNEW for 588*l.* The same purchasers secured the three principal works by CLAUDE LORRAINE, paying 6,090*l.* for the two companion pictures, *The Landing of Æneas* and the *Sacrifice to Apollo*, and 3,990*l.* for the *Landing of Æneas in Italy*. The conclusions to be drawn from the sale are that buyers are willing to give good prices for ancient works by great masters—when their authenticity is undoubted—but that it is now more difficult than ever to prove that title.

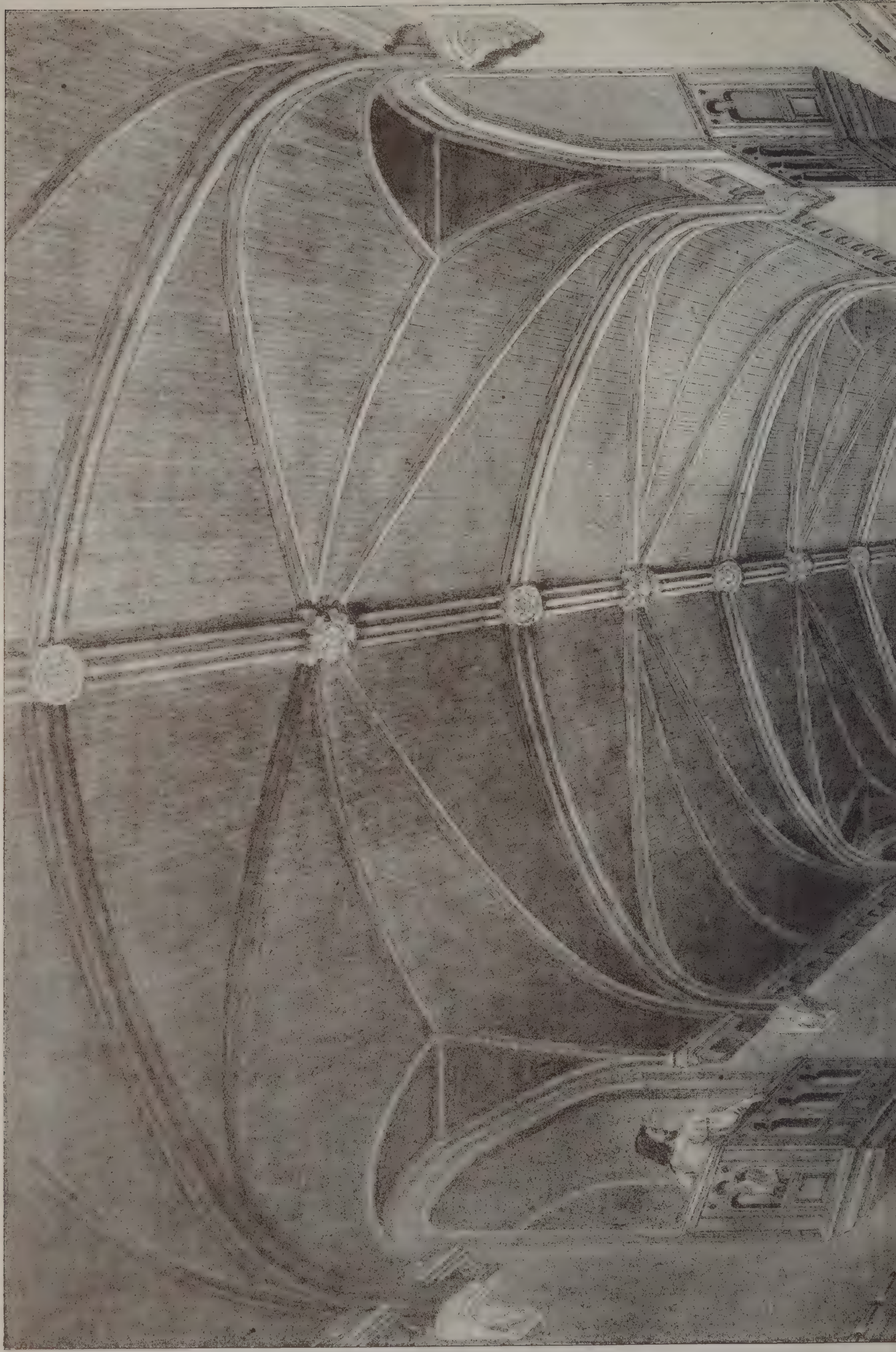
It is not often that there is a chance for buying an entire island. On the 29th inst. MESSRS. DEBENHAM, TEWSON & Co. will offer for sale in London the island of Herm, which is situate between Guernsey and Sark. It measures a mile and a half in length, and is about three-quarters of a mile in width. The present population is only about thirty-seven. Upon the island are an hotel, several residences, a school-house, harbour, and granite quarries. With an island of this area it would be possible for a philosopher to try all sorts of experiments in public economy, but it is more probable that it will be purchased as a holiday resort, and it would be difficult to find another which has such peculiar advantages.

THE Theatre Royal, Edinburgh, has once again succumbed to fire. On Monday, during the rehearsal of "The Nightingale," flames were found to issue from a room in which properties belonging to the last Christmas pantomime had been stored, and in the course of a couple of hours the building was destroyed. It was found that even the brick wall between the stage and the auditorium was unable to resist the heat. English visitors to Edinburgh will remember the position of the house. It stood at the corner of Broughton Street, and faced the broad road known as Leith Walk. The position was not unfavourable for the firemen's exertions. Theatres are allowed to be erected in unexpected places in towns, but the Edinburgh Theatre adjoined a pro-cathedral. On a former occasion when the theatre was burning, the Dean of Guild and several firemen were killed in endeavouring to save the church. There is apparently some fatality about the site, and the civic authorities should insist on the new building being as nearly fireproof as it can be made.

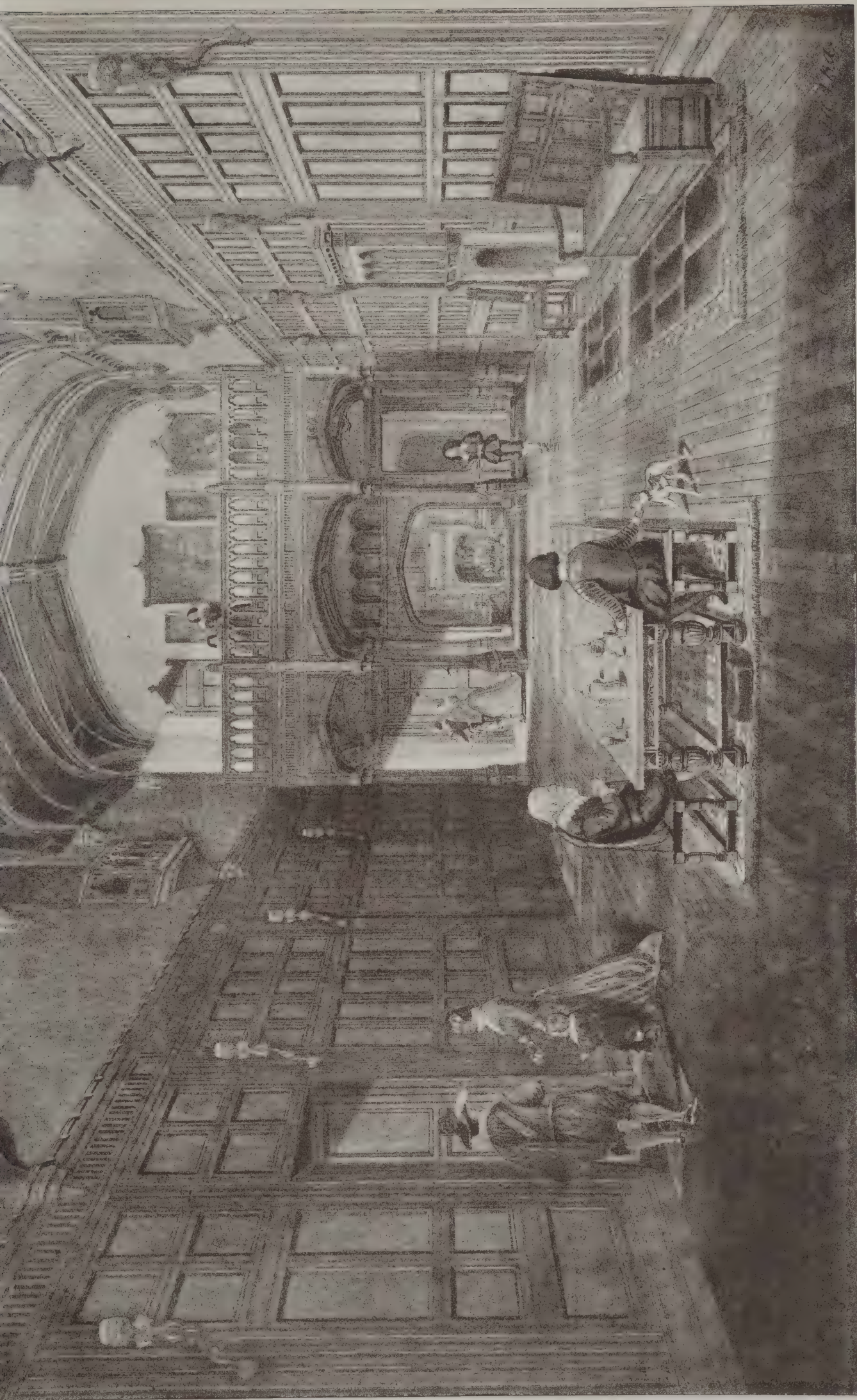












BANQUETING HALL, HALLYBURTON HOUSE, FORFARSHIRE.

ANDREW HEITON, FRIBA. ARCHITECT.







## ILLUSTRATIONS.

HARMONY WELCOMING THE NATIONS.

ALTHOUGH poets have so often sung in clarion tones about war and warriors, they have also had visions of the reign of the meek-eyed Peace, and in a variety of forms, from epics to lyrics, have expressed the simple prayer which was heard in the Catacombs, "Dona nobis pacem." HOMER saw the vision amidst scenes of broil and battle; it inspired VIRGIL, and so effectually that, in spite of the poet's dying wish that the poem should be destroyed, the "Æneid" was utilised by AUGUSTUS as if it were a State paper written to support his policy. DANTE forgot his revenge for a while in thinking of what Peace was to do for Italy; MILTON believed that in the beginning of our era she had reigned on sea as well as on land, and was to rule again:—

No war, or battle's sound,  
Was heard the world around;  
The idle spear and shield were high up hung;  
The hooked chariot stood  
Unstain'd with hostile blood;  
The trumpet spake not to the armed throng.

When a new pleasure was created in our time by international exhibitions, the poets once more sang of Peace. THACKERAY, who was not disposed to think over-much of human perfectibility, fancied for a moment, with a thrill of love and awe, that even Vanity Fair might know something of the anticipated millennium. Mr. TENNYSON, to whom, in the interval between exhibitions, Peace was no more than a commonplace shepherdess piping on her pastoral hillock a languid note when she was not thinking of what sheep were to fetch in the market, in his turn had the old dream and saw men

Breaking their mailed fleets and armed towers,  
And ruling by obeying Nature's powers,  
And gathering all the fruits of Peace,  
And crown'd with all her flowers.

Whether there is any sincerity in a poet's preference of peace to war it would be difficult to discover. It is his endeavour to express thoughts which will gain approval, and he claims a good deal of latitude in consequence. As the shrewd Frenchman said, "Si les Titans avaient chassé JUPITER, les poètes eussent chanté les Titans," and they would have gained applause from others besides the victors. It is not therefore surprising that, when M. LAMEIRE prepared his colossal piece of decorative painting for the Salle des Fêtes of the last International Exhibition at Paris, he was inspired, like one of the poets, by the sentiment which then prevailed, and that he desired to make the world know that the Republic, unlike the Empire, was synonymous with peace. In this case the presiding spirit is France itself under the type of Harmony, and all the nations are under the influence of her spell. The northern nations, Denmark, Sweden, and Norway, bring with them the banner of COLMAR, and are guarded by the wolf of ODIN. Next stands Holland, who seems to have been suddenly attracted from her dairy farm, and to have snatched an oar on her way. England is an Imperial dame, at whose feet the Indian elephant kneels, and no less dignified are the figures of Austria, Hungary, and Belgium. Italy, as becomes her position in any assembly relating to music, stands crowned with laurels. Near her are Spain and Germany. The two turbaned Turks are portraits of architects who are among the artist's friends. On the opposite side are the figures which are emblematic of Greece and Russia, North and South America, the Pacific Islands, and the East, while at the ends we see the envoys of Japan and Egypt hastening with all speed to Paris. The difficulty of arranging figures to fill a space of the form that is indicated in the illustration will be apparent at a glance, and the poetry and invention of M. LAMEIRE are evident if his design is compared with any of the processions of workmen of different nations which commonly constitute the tributes from the painter's art to international exhibitions. M. LAMEIRE always avoids stereotyped plans, and whatever may be the subject he undertakes we are sure to have something original from his pencil. It might be said that his works are characterised by a combination of learning and inspiration, and that one quality enhances the other. M. LAMEIRE has studied the decoration of all ages without becoming a pedant, and his mind is so well balanced that his invention can be allowed full play without any fear that it will produce freaks

or frivolities. There would be no risk in entrusting to his hands a Gothic cathedral or a boudoir; he has decorated churches in all styles, ancient and modern châteaux, public buildings and private houses. His work is to be seen in Amiens and Périgueux as well as in Paris, London, and Rome, and he is alike competent to design a brooch or to aid in the deliberations of the Commission des Monuments Historiques. It was by the archaeological accuracy as much as by the originality of M. LAMEIRE'S designs that the late WILLIAM BURGESS was impressed, when he proposed that the drawings for the "Catholicon" should be purchased by the Science and Art Department, and sent about the country to the various art schools, in order that they might be studied and copied. For that design M. LAMEIRE obtained the first medal for architecture and the Cross of the Legion of Honour at the Universal Exhibition of 1867. But it must be said that he has always co-operated with architects instead of superseding them. The original tympanum measures 140 feet in length, and the figures are about 18 feet in height.

BANQUETING-HALL, HALLYBURTON HOUSE, FORFARSHIRE.

THE banqueting-hall, which is on the principal floor, forms the *motif* of the plan of this house. Placed close to the entrance-hall and staircase, and giving access to drawing-room, billiard-room, and family suite, it fills exactly the position of the hall in old English manors. The walls are wainscotted to a height of 13½ feet, and the ceiling is arched in oak, having moulded transverse and diagonal ribs and carved bosses at the intersections. The hall is lighted from the south-west by a large traceried window of five lights. A recessed fireplace, forming an angle-nook with side seats, is placed at the north-east end, and is divided from the hall by arcading in oak, which supports a minstrels' gallery richly groined on under-side, which is reached from the main staircase. Passages to bedrooms running along both sides are lighted from the hall by means of arched openings filled in with balconettes, and are connected with the gallery. A large recess on the west side beneath the gallery, with polished and moulded stone archway and large three-light window, forms the bower, and gives light to this end of the hall. The dimensions of the hall are—length, 60 feet; width, 22 feet; height, 27 feet.

The joiner-work has been admirably executed by Mr. SHILLINGLAW, Edinburgh. The architect is Mr. ANDREW HEITON, F.R.I.B.A., of Perth.

## AN ARCHITECT'S DIFFICULTIES.

A MEETING of the Carlisle Board of Guardians was held on June 26, when Mr. Oliver, the architect of the hospital at the workhouse, attended the meeting, and the clerk read the following communication from him bearing upon the question of the delay which had taken place in the erection of the hospital:—

"I have received a copy of the resolution passed at the last Board meeting together with a copy of the report of the Hospital Building Committee. Referring to the latter, I beg to say that I agree generally in condemning the delay in the progress of the buildings. I feel I shall have no difficulty in showing that I have done all in my power to hasten the completion of the works, and for that purpose I must draw the attention of the Guardians to the real causes of the delay. I consider them to be fourfold:—1st, altering the position of laundry block; 2nd, slating; 3rd, heating, hot water, and steam supply; and 4th, general dilatory behaviour of contractors.

"1st. With regard to the altered position of laundry block. On September 15 last, according to instructions, I stopped the builder from proceeding with laundry buildings in the position first intended, and it was the second week in November before he was authorised to proceed with their erection; thus fully two months were lost in starting these buildings, at which the contractor complained.

"2nd. Slating.—I wrote to the slater on September 22, and again on September 27, complaining of the delay. On October 22 I wrote complaining again, and threatened to lay the matter before the Building Committee; on October 31, and again on November 2, I urged more progress (about this time I took a large contract out of his hands which had been accepted, and placed it in the hands of another firm at Penrith); on November 20 I wrote again, and afterwards reported the delay to the Committee; and on November 28 I gave him seven days' notice to complete his contract, failing which I threatened to employ some other contractor, charging him with all expenses. The work then proceeded rather better, but on February 19 of the



present year, some part of the work in the main building being still incomplete, I wrote informing him that I should advise the infliction of the penalty named in the contract. I wrote again on February 23 and on March 25. I ordered him and his men off the works, and advertised for slaters. I had no reply to the advertisements, as the effect of the severe storms at that time was keeping slaters fully employed. In addition I have frequently seen the contractor for the slating, and urged on the progress, and so has the clerk of works.

"3rd. Heating, hot water, and steam supply.—On October 2 tenders were invited for the engineering works, and it was not until November 17 that I had instructions to accept Messrs. Haden's tender. Of course, after the acceptance of their tender a great deal of material had to be specially prepared, and a much more elaborate system having been adopted than first intended, structural alterations and additions had to be made to suit. I need not point out that the mere fact of the heating pipes and hot water supply not being fixed prevented the progress of other works.

"4th. As I have already stated, notwithstanding the principal drawbacks to which I have referred, I have on numerous occasions urged the contractors to expedite the works, and as recently as Whit-week I found fault with Haden's for taking their men away (it being a general holiday in Manchester) at a critical time, and causing delay to other trades.

"I must now refer more particularly to the report of the Hospital Committee. It states that from the day of my report on April 16 to June 10 the laundry block is almost in the same state as it was eight weeks ago. In my report of April 16 I stated that very little progress could be made with the laundry block until the acceptance of tenders for the drying-closet fittings, &c., and it was not until May 17 that I was authorised to accept Messrs. Haden's estimate. The committee report is dated June 10. The reason of delay is obvious. I am glad to be able to report that satisfactory progress is now being made with every part of the works. The main buildings are now nearly completed, and the painter is at work. The annexes to old buildings will be completed this week. I am afraid that some time will be lost next week owing to the races. I fully expect the works will be entirely completed in about five or six weeks, and the Board may rely on my using every effort to insure this being done."

## THE GREAT EXHIBITION OF NEW ORLEANS.

THE buildings for this gigantic exhibition are now being rapidly pushed forward. The exhibition promises to surpass in size that of the London Great Exhibition of 1862, as well as the recent Centennial Exhibition, in the number of its exhibits. The London buildings of 1862, which up to that time was the largest exposition structure ever erected, contained 1,400,000 square feet. But the main building at New Orleans will contain 1,656,000 square feet, requiring 9,000,000 feet of lumber, 4,500 kegs of nails, and 5,000 boxes of glass, in its construction. It will be 60 feet high, with a tower 115 feet, and it will have a music-hall in the centre with a seating capacity of 11,000. To light the building there will be 15,000 incandescent lamps, and the steam required for the whole structure will be upwards of 3,000 horse-power. The horticultural hall is a handsome structure, 600 feet long by 194 feet wide, with glass roof and glass tower 90 feet high. This will form the largest conservatory in the world. It is intended to arrange around the sides specimens of the choicest plants from Mexico, Central America, Florida, California, and all parts of the United States and Canada, and a special commissioner will visit Europe for the purpose of securing specimens of fruits and plants in order to make this display international in character. The centre of the hall will be devoted to an international fruit display, presenting 20,000 varieties. This is nearly double the quantity of any previous fruit exhibit. There will also be an art gallery. About 1,000 men are engaged on the work of the main buildings, which will be ready for the reception of exhibits in August next.

## THE HELLENIC SOCIETY.

THE annual meeting of the Hellenic Society was held at 22 Albemarle Street on June 26, when the chair was taken by the Bishop of Durham, the president of the society. After the adoption of the Council's report, which gave an encouraging account of the progress of the society, the president delivered an address upon the work that had been done hitherto, and that might be done in the future. After expressing regret that he was only now for the first time appearing in the office which he felt it a high honour to hold, the Bishop of Durham sincerely congratulated the society upon its achievements so far. The journal, for its originality and scholarship, for the interest and variety of its articles, might challenge comparison with any similar periodical, whether English or foreign. Referring to the forthcoming reproduction by photography of the Laurentian Codex of Sophocles, the president said that the reproduction of any unique manuscript was

of essential importance, in the case of its loss by fire. It was satisfactory to note that the society had taken an active part in promoting the scheme for a British school at Athens. It was hardly creditable that England should be so far behind her neighbours in the establishment of such a school, considering her close political connection with Greece, and her really wide interest in Greek literature. Until there was such a centre of work established on Greek soil Hellenic studies in England would be at a decided disadvantage. Referring to the society's work in the field of exploration, the Bishop of Durham said that, perhaps, to most scholars Hellas proper presented greater attractions, but for his own part he ventured to think that the ground which had actually fallen to the lot of the society would yield even richer results. Beneath the soil of Asia Minor lay hidden the key to many an interesting problem in history and ethnology. As an example might be cited the light recently thrown upon the remarkable extension of the Hittite empire. Referring to his own special line of study, the president dwelt in some detail upon the value of Mr. Ramsay's discoveries as illustrating the early history of the Christian Church in Phrygia, and showed by several examples how much might be learnt even from the finding on an inscription of a single name. Mr. Ramsay had still before him important and numerous discoveries, and it was greatly to be hoped that his work would not be hindered by lack of funds. The president, in conclusion, threw out two suggestions for the society's work in the future. In the first place might be undertaken by competent persons the thorough investigation of the monastic and other libraries in the East. The investigators should be competent in every branch of Hellenic study, or some manuscripts of great value might escape if they chanced not to belong to their special department. Thus the invaluable manuscript of the Epistle of Clement of Rome was found only a few years ago in a library at Constantinople which had been already examined by three trained scholars, English, French, and German, all of whom were no doubt concentrating their attention on the discovery of classical manuscripts. But from any point of view the discovery of a piece of genuine Christian literature of the first century A.D.—that great crisis in the world's history—was surely of the highest importance. Another work that might usefully be undertaken by the society was the mapping out of subjects to be worked upon by competent young scholars, who would devote time and labour to their solution. Many vexed questions might be cleared up in this way. While congratulating the society upon its achievements in the past, the president trusted that its ambition would not stop there, but push on its conquests to regions yet unconquered.

Mr. Gardner stated that the next number of the "Journal of Hellenic Studies" would not be published until the autumn, by which time an ample supply of papers would be forthcoming. He thought that if the excellent advice of the president as to the mapping out of subjects for investigation could be followed at Oxford and Cambridge the greatest benefit would result both to the individual workers and to the cause of learning at large. Mr. Newton, in moving a vote of thanks to the auditors, took occasion to refer both to the work of the society and to the general progress of archaeological research during the past year. He was peculiarly glad to hear from so great an authority as the president of the society so high an estimation of Mr. Ramsay's work, for he had himself been concerned in appointing Mr. Ramsay as a travelling Fellow to the University of Oxford and in indicating his field of labour. Under extraordinary difficulties and in a comparatively short time Mr. Ramsay had established important historical results. Alluding to Mr. Wood's discoveries at Ephesus, Mr. Newton said that the inscriptions published in his book gave no idea of the store of facts contained in the mass of Ephesian inscriptions at the British Museum. In these, which had been carefully examined by Mr. Hicks and would be published next year, a new and most instructive light was thrown upon the constitution of the great hierarchy which governed the Temple of Artemis. It was a shameful thing, said the speaker, that when the Government grant had been exhausted Mr. Wood's frequent appeals to the British public for funds to carry on his researches had been practically unheard; whereas, when the grant made by the German Government for the excavation of Olympia had been exhausted, a sufficient sum was at once raised by private subscription to complete the excavation of the Altis. The great hope was that young men were now being trained at our Universities who would be in time competent to carry out the work of exploration. For twenty years past, in France and Germany, there had been a constant succession of young scholars, first sent to the schools at Athens, then upon special missions, and in course of time promoted to chairs of archaeology at the different Universities. Such a supply of men, and such means of steady promotion, we might one day hope to see in England. After pointing out that much help might be given to exploration by wealthy Englishmen who went year after year to the Mediterranean in their yachts, Mr. Newton concluded with a rapid survey of the discoveries of the year, dwelling especially upon the remarkable tomb of a Seleucid monarch found by the Germans in Kurdistan. In Greece the plan of the temple at Eleusis had been finally established, and at the entrance of the Temple of Æsculapius at Epidaurus had been found a set of inscriptions recording in detail how certain miracles were worked.



## GRAND AVENUE MANSIONS, WEST BRIGHTON.

THE new mansions which have been for some time in course of erection at West Brighton by Mr. John T. Chappell, of Lupus Street, Pimlico, have excited a great amount of interest among the inhabitants and visitors. They are an experiment in construction and arrangement and a testimony of the owner's enterprise. The elevations have been designed by Mr. G. Sherrin. The principal fronts are faced with white pressed gault bricks, with moulded window reveals and stone heads, ornamental brick and stone strings, cornices and parapets, with terra-cotta balusters, Portland stone balcony landings, supported by carved stone trusses to the first-floor reception rooms of Grand Avenue Mansions and Airlie House; the forecourts, piers, and dwarf walls in pressed gault bricks, Portland stone plinths, copings, and pier caps, with terra-cotta balusters; Portland stone steps, with Mosaic pavings to entrance. The open areas are paved with asphalt. The reception-rooms on the south front overlook the private lawns and the sea, of which there is an uninterrupted view. The bedrooms of the eastern residences look on the Grand Avenue, whilst those of the western residences face the west. The domestic offices in each case face the north. Albert Mews, which comprises seven sets of stables, is approached from the Third Avenue by a private road, which also gives access to the tradesmen's entrance to Grand Avenue Mansions and Albert Buildings. Airlie House, which separates the north and south blocks, will be let as a private residence, and Grand Avenue Mansions and Albert Buildings are arranged for high-class residential flats. There are very commodious business premises on the ground floor of Albert Buildings. The Grand Avenue Mansions have two residences on the ground floor (which is about 5 feet above the pavement) and the same on each of the four floors above, ten in all, with porters' rooms, and the extra rooms on the lower ground floor, any of which can be let to the tenants of the residences if required. The principal entrance, main stairs, and hydraulic passenger lift are on the south front, where a porter will be in attendance. There is a secondary staircase with luggage lift approached from the north front, with access from the private road leading to Third Avenue. The staircases are of stone, and the principal stairs are carpeted. The landings are of Mosaic, and the walls and ceilings decorated. The floors and roof of the building are of fire-proof construction. The western residences have at the south-west corner and approached from the dining-room an extra room large enough for a full-size billiard table, with lavatory, or the room could be used as a bedroom, or could be divided into bed and dressing-room, with lobby entrance, slop sink, and broom closet. In addition to the library, dining-room, drawing-room, and five bedrooms, each residence has a kitchen fitted with range, scullery, with stoneware glazed sink (hot and cold water), fitted table, draining-boards; a china closet, with lead-lined sink (hot and cold water), and fitted cupboards; a bathroom with copper enamelled bath (hot, cold, and sea water), three w.c.'s, one being fitted with lavatory (hot and cold water), larder, wine cellar, coal cellar (in addition to the one in the vaults), and ample and complete stores, an ornamental fitting in bedroom corridor, containing four cupboards, several drawers, table top, and fixed mirror over. The sanitary arrangements are carried out on the most approved principles with the best appliances; the soil pipes are in all cases outside the residences, and are ventilated, as are also the drains. No pipes of any kind enter the dwellings except those actually belonging thereto. Each residence is appropriately decorated; all the reception-rooms have hard wood chimney-pieces, with marble joints, marble fenders, and tile hearths; the best bedrooms are similarly fitted, but the wood chimney-pieces are painted and decorated to correspond with the woodwork of the rooms. The floors of the reception-rooms, corridors, and best bedrooms are of pitch pine, prepared for polishing. Stained glass of appropriate designs is introduced in lobby and corridor windows and in all lobby screens and dining-room doors. Venetian blinds are provided to all the principal windows. Gas services and electric bells are fitted throughout, and the walls and ceilings of every part have been thoroughly dried by Ligny's patented process. All the rooms and principal bedrooms are large and well-lighted, and those on the third and fourth floors slightly exceed those below.

On Saturday last Mr. J. T. Chappell conducted a party of visitors over the Grand Avenue Mansions, and then explained the arrangements. He said that he had for some years made the construction of residential flats a subject of special study, and felt that this class of building was now coming into much greater favour than formerly. Such buildings were especially valuable in towns like Brighton and Hove, where there was but a limited amount of sea-frontage, and that eagerly sought for, as they enabled a much larger number of persons to enjoy a residence on the front of the town than could possibly be provided with private houses of the ordinary kind. Proceeding, he said he had carefully considered the objections and difficulties in connection with flats, and having examined the plans of nearly all the flats in London, had been able to reduce to a minimum, if not to entirely abolish, all the objections which could be raised against this kind of residence. He explained that each residence in the mansions was

entirely separated from the others, even from the neighbouring set of apartments on the same floor, and that the sanitary arrangements had been so arranged that one tenant could not be annoyed by defects arising in consequence of carelessness or otherwise on his neighbour's premises. All pipes were carried in bricked cases outside the building, and in these cases ladders were permanently fixed so that a workman could ascend to either floor, take off the caps, which were fitted at each connection, and clean out pipes running into the flats without entering the residences at all. All the chimneys were lined with circular terra-cotta tubes, in order to prevent a large accumulation of soot, and each one had been tested and found perfect. He also explained the perfect ventilation of the drains and pipes, and the chemical test to which the work had been put to prove its stability, and then referred to the perfect water supply, which is laid on the most approved principle, all water except for the water-closets being drawn direct from the mains. He gave details as to the construction of the fire-proof floors, and the means of ventilation employed, and concluded by giving an outline of the general construction, which has been fully stated above.

## TECHNICAL EDUCATION ON THE CONTINENT.

AN address was delivered by Professor Roscoe, of Manchester at the close of the first year's courses of the Dundee University College on June 26. After distributing the prizes, the Professor said:—If we look back to the beginning of the century, we find that the Germans had established about a score of Universities in that series of different kingdoms which has now been joined together to form the great German Empire. At present there are twenty-four such Universities, with no fewer than 35,000 students undergoing tuition of different kinds in the various faculties of these twenty-four German Universities. At the beginning of this century these Universities existed, and had existed for many generations; but, whilst England was progressing and making large strides in industry and commerce, in Germany such an industrial system was unknown, and the large factories of England gained complete possession of the trade of the world. We in England knew how to spin cotton and flax, and how to make locomotives, and how to build railways, and that knowledge was gained by us alone, and the consequence was that at the end of the great wars the Germans found themselves face to face with a complete industrial system in this country, which was altogether unknown in theirs. The Germans, therefore, began to ask themselves in what way they could endeavour to obtain a portion of these great manufacturing industries; how they could employ their people as we were employing ours, and they said, and that very truly, that in order to educate the class of men capable of carrying on such practical work the existing schools and Universities were insufficient. The schools did not give instruction in such subjects as those of engineering, chemistry (theological and applied), and physics (pure and applied). Hence the German Governments started what have since been called polytechnic schools, and now there are no fewer than a dozen or more of these large polytechnic schools situated in different centres of Germany, in which the subjects taught are to a great extent the same as those taught in the University, but to these others have been added the practical sciences, such as engineering, which were not and are not in the curriculum of the Universities. Now, the number of these polytechnic schools which have been established and the expense to which the German Government have gone, not only in building, but in supporting their schools, is something very large indeed—something we have no idea of in our country. Then you must remember all the work done in the way of education is done by the Government. In these countries as yet, ladies like Miss Baxter or gentlemen like Charles Beyer, of Manchester, and others whose names are on the honourable roll of donors of great sums for educational purposes do not exist, or the Germans have not as yet gone so far as us in that wise and beneficent way of spending their money. They rely on the Government. In that country the Government supplies all the money, and fees are placed at a very low figure so that all or almost all students desiring to obtain knowledge of the kind may get the information and education they require. To mention only one of these: I dare say many of you have seen that beautiful building situated in the town of Zurich, the large polytechnic school of that town, which has been founded by the Swiss Federation. They built the school, they pay the professors, and the students come not only from all parts of Switzerland, but from all parts of the civilised world to benefit from the instruction there given. We have seen the work that your Professors do here—the small number of them you see before you. If I had been engaged in a similar ceremony at Zurich I should have had forty-five professors behind me and thirteen assistants. The number of courses in the Zurich school is no less than two hundred. The cost of this school is extremely great. For example, they have just found their chemical laboratory insufficient for its purpose, and the Government of this little Federation have just voted 50,000*l.* for building a new chemical laboratory for the Zurich Polytechnic. Nor is this



money voted without a view to economy. In their Chamber the other day this subject came up, and the question was raised as to the economical value of such an expenditure on a laboratory, when it was stated, in answer to the objectors, that this sum was small compared with the amount of money earned by Switzerland by the establishment of works in which chemical knowledge was necessary. It was pointed out that the men who were erecting these great works—colour works, dye works, and calico printing works—had all been educated in the polytechnics, and that without this education these industries would be carried off to other countries, so that it was really a question of economy to vote this 50,000*l.* for the laboratory at Zurich. Then at Hanover a large polytechnic school has been established. The kingdom of Hanover has ceased to exist, and the Welfenschloss built, I believe, by the late king has been turned into a polytechnic school, at a cost of 350,000*l.*, while the cost of the collections of minerals, apparatus of one kind or another, and a museum necessary for the illustration of the subjects taught has been 26,000*l.*, and the expenditure for the maintenance of these collections about 1,200*l.* per annum. Again, if we go to Berlin, those of you who have visited that city know that in the neighbourhood there is a castle where the German Emperor sometimes resides. An enormous building has lately been erected there—not a palace, but a polytechnic school—at a vast expenditure of money, a good deal of which, I believe, came from France. The actual sum spent has been about 650,000*l.* I mention these facts to show you the interest taken in Germany in this great subject of scientific education, and to tell you what they think it is necessary to do; for as a German said to us:—"You Englishmen are a practical people, and you very well understand that we in Germany, highly taxed as we are for our military system and other necessary evils, would not vote large sums of money to be spent on educational purposes unless we believed it paid us to do so." The fact is that the establishment of these polytechnic schools has without doubt had an enormous influence upon the industries of Germany. We hear a great deal about foreign competition—about the manufactures of Crefeld and Chemnitz being sent into neutral markets against our own. The German opinion is that that position which they have gained has to a great extent been due to their determination to educate themselves at all costs, and to bring themselves up to the point which is necessary in order to carry on these great industries successfully. There are now almost no locomotives of English manufacture to be found on the Continent. On some of the lines which are worked by England, as for instance the Dutch-Rhenish, the Manchester locomotives are seen, but on all the other lines English locomotives have been discarded. They build their own engines, and their mechanical work is as good and as perfect as anything we can do in this country. Well, then, the origin of these polytechnic schools I have endeavoured to point out, and also their works; but it is only proper to say that this thing may be overdone, and at the present moment this seems to be the case in Germany. For, now that Germany is united, the number of these polytechnic schools is really greater than is needed, and we find on examination that, whilst the number of scholars who can be accommodated in these great schools amounts to 6,000, there are at the present moment not more than one-third of that number being educated. The fact is that the great demand which arose twenty years ago for building railways and carrying on engineering works of all kinds has to a great extent ceased, and the consequence is that the number of young men who attend these special engineering schools in Germany is now very much less than before; thus we found large rooms in large buildings devoted to the subjects of drawing and practical engineering very sparsely inhabited. This, then, is clear, that the Germans have run rather too quickly, and that they have done more than was absolutely necessary for the purpose; and yet there can be no doubt that these schools have exerted the very greatest influence on the commercial and manufacturing sections of trade, and that without these schools Germany never could have accomplished what she has accomplished. While such has been the case, the question may naturally suggest itself to those who look at this system from an outside point of view, Why not teach in the present Universities the practical subjects which are necessary? Well, that was the question which the Germans themselves have solved in one way. They say—We like to continue our University education on the old lines, and we have many reasons for thinking it desirable not to bring the practical subjects into the University curriculum, but rather to have separate schools for that purpose. But almost all scientific men and men whose business it is to weigh questions such as I am now considering, tell us if they had to do the thing again they should do it differently, and it would be the greatest mistake for us in England and Scotland to start separate institutions of this kind—one for teaching the practical sciences, and the other for teaching literature and the old literary learning. It is very gratifying to find that the lines which you have drawn out for yourselves here in Dundee and those drawn out by us in Manchester, in Liverpool, by the authorities in Cardiff, by the people in Bangor, in Leeds, in Sheffield, and in other large centres, are exactly those which, from our knowledge of what has been done in Germany, we think the best—that is to say, not to sever your subjects, but to make a University College, as your name implies,

an institution in which not only the subjects which are necessary for the advancement of our great industries—chemistry, whether pure or applied; mathematics, which is the foundation of all sciences; physics, again, whether pure or applied as in your classes of electrical engineering—that classes of that kind should be joined with others of a less practical but no less necessary character, viz., the old lines of literature and of language which have formed the basis of man's education since time was.

### UNDERPINNING WALLS.

A DECISION has been given in an action which was brought by Messrs. Hastie & Co., of Greenock, against the Police Board. The plaintiffs are the owners of a dwelling-house at the junction of Kilblain Street with Nicholson Street in Greenock, the entrance to which was formerly from Nicholson Street, along a terrace about 6½ feet in breadth, and raised about 3½ feet above the level of the street. In 1875 Messrs. Hastie & Co. allowed the Police Board, in levelling and forming the street, to remove this terrace, on the condition that the walls of their property were to be made secure and properly underpinned. Afterwards it was noticed that the wall next Nicholson Street was subsiding, and on March 19, 1883, it appeared, was in so dangerous a condition that, upon the order of the Master of Works, the plaintiffs were obliged to shore up the house and release the tenants from their obligations. Ultimately, the entire gable wall had to be taken down and rebuilt. Messrs. Hastie & Co. maintained that the subsidence was caused through their property not having been properly underpinned when the terrace was removed, and claimed damages on account of the loss they had sustained. The Sheriff-Substitute found for the plaintiffs, with expenses, but sent the case back again for the purpose of ascertaining the amount of damages. The Board appealed to Sheriff Moncreiff, who dismissed the appeal and affirmed his substitute's decision, and decreed that the plaintiffs were entitled to additional expenses. His Lordship says that the proof in the case is so voluminous, and the conflict of the evidence of the builders examined (many of them men of well-known ability and experience) is so great, that it is not without considerable hesitation that he has arrived at his decision. It is quite clear that the Police Board admitted in 1874 that Messrs. Hastie had certain rights, whether of property or otherwise it is immaterial to inquire, in the terrace which lay between what is called the Kilblain Street property and Nicholson Street. It is also clear that the Messrs. Hastie consented to the terrace being removed only on condition that the walls of their property were made secure and properly underfooted. It is proved that the Board undertook to make the walls secure and to underfoot them properly, and that the plaintiffs were not consulted as to the manner in which the work was done, or as to the sufficiency of the precautions taken. The Board undertook the whole responsibility, and had the house specially watched for years after the work was done. The next question was whether the work of underpinning was properly done. The Board contracted for the work with a builder of the name of M'Lure. They seem to have been unfortunate in their selection, because it is admitted on all hands that, to put the matter in the most favourable light, M'Lure was not fit to be entrusted with the work unless he was carefully watched. In point of fact, the underpinning in question was the last piece of work with which he was entrusted by the Board. Now, under the specification M'Lure was bound to underpin the remaining wall to its full breadth of about three feet; but when the work was examined in 1883 it was found that he had only underbuilt it to an extent ranging from nine to fourteen inches. It is also proved by a number of the plaintiff's witnesses that the underpinning was not built hard up against the clay, into which water had percolated. It is quite true that some of the Board's witnesses say that they did not observe any such cavities, and it is possible that there were none at the points inspected by them. But this negative evidence cannot stand against the positive evidence of the plaintiff's witnesses, and the one witness for the Board admits that if spaces had been left at the back the underpinning would not have been sufficient. It is to be observed that one result of this departure from the specification was that the contractor pocketed upwards of 10*l.*, being the difference between the price of the work contracted for and the work done. The Board, however, boldly maintain that the plan adopted by the contractor and sanctioned by them was the best and safest. The Sheriff is of opinion that the weight of the evidence, which is in accordance with common sense, is to the opposite effect. He cannot doubt that the general rule is that underpinning should at least be done to the full breadth of the wall underpinned; and although the Board's witnesses say that the amount of underpinning necessary is a question of circumstances, they do not say that they ever before saw underpinning done in the same way in similar circumstances, that is, where there was both vertical and lateral pressure to be resisted. The truth is that the removal of the terrace was an extremely risky operation, looking to the age of the buildings and the height of the bank on which they stood. It may be doubted whether it was safe to remove the terrace at all. It was certainly necessary that if it was to be removed extra pre-



cautions should be taken to make the retaining wall secure. The next question, which runs into the one just considered, is whether M'Lure's defective work was the cause of the injury complained of to the plaintiffs' property. If it was established that the work was done negligently, the burden is upon the Police Board to show that the injury to the gable resulted from some other cause. On this point there is a great conflict of evidence; but there are certain matters proved, which, in the Sheriff's opinion, are sufficient to turn the scale in favour of the plaintiffs. It is proved by the defendants' witness, Robert Benson, who sold the Kilblain Street property to the plaintiffs in 1873, that although the tenement was old it was then good and substantial. He states that there was a crack in the wall facing Kilblain Street near the corner of the east gable, but that it did not become worse while he retained the property. Now, immediately after the removal of the terrace this crack widened so much as to alarm the tenants and to lead to their presenting a petition in the Sheriff Court in November 1875, against their landlords, and the Board, for the purpose of having them ordained to make the building safe. It seems to have been conceded on all hands in that process that the widening of the crack was due to the removal of the terrace and the operation of underbuilding, but it was maintained, and successfully, by the Board that the underbuilding had settled, and that there was no imminent danger to the inhabitants calling for the interference of the Court. The Sheriff thinks he must hold it as proved that the widening of the crack in 1875 was the direct result of the Board's operations. The importance of this fact will be seen. The question, then, comes to be whether, when, in 1882, this same crack is found to have become dangerously wider, it must not, in the absence of clear proof to the contrary, be held that its widening resulted from the same cause as in 1875. The Board endeavour to account for it in every way except by referring it to their operations. The age of the building, the vibration of the plaintiffs' machinery, the percolation of sewerage about the foundations, and the reconstruction of a drain in the adjoining close, are all suggested as the true or probable causes. The Sheriff has carefully considered the evidence as to all of those alleged causes, and he does not think that, taken separately or together, they are sufficient to account for the subsidence of the east gable. The age and condition of the building may be elements to be taken into consideration in fixing the amount of damages; but looking to the fact that before the Board's operations there were no signs of the gable giving way, its age cannot be regarded as being in itself the cause. At the debate before the Sheriff the Board did not maintain that the vibration of the machinery had anything to do with the matter. The theory which was most urgently pressed was that, owing to the condition of a drain running from the back of the tenement to Nicholson Street, or to the reconstruction of that drain in 1882, the foundations of the east gable had been weakened. The Sheriff has read the evidence on this point more than once; but looking to the lie of the ground, and the relative positions of the drain and the gable, he is not satisfied that the gable could have been affected by the drain in question or by sewerage escaping from it. The point in the case as to which the Sheriff has felt most difficulty is that there were apparently no signs of fissures in the clay which is said to have subsided. The Board's witnesses say that they would have expected to have found such fissures had the retaining wall given way, while the evidence for the plaintiff is to the opposite effect. But in corroboration of the latter there is the important fact before noted, that in 1875 there must have been a slight subsidence, as the gable was affected by the defendant's operations, and yet no fissures appeared. The amount of damages was fixed at 260*l*.

### BRICK WALLS FOR STEAM-BOILERS.

THE report of the chief engineer (Mr. Henry Hiller) to the directors of the National Boiler Insurance Company, contains much practical advice which is worthy of attention from the owners of boilers. During the past year no fatal or destructive explosion occurred among the large number of boilers insured and inspected by the company; but some were injured by overheating, arising from deficiency of water due in most cases to mistake or neglect of attendants. Mr. Hiller insists on the importance of having boilers properly prepared for the thorough examinations which the inspectors of the company are anxious to make at intervals of from twelve to eighteen months, and for that purpose care should be taken in constructing the brickwork in connection with the boilers. A serious risk is incurred through the plates of boilers becoming thinned by external corrosion, and some of the most serious disasters on record have arisen therefrom. This is a preventable defect, and may be entirely avoided, providing the boiler is well made, judiciously set, and managed with ordinary care; whilst due access to every part for complete thorough inspection at suitable intervals is essential, so that any defects which may exist may be detected and made good.

The plates in a large number of boilers were found seriously weakened in contact with brickwork; this, as usual, frequently occurring at and about the blow-out pipe attachments, many of which are still met with buried in broad brickwork, which pre-

vents their being examined and leakage being detected. When cross walls are built at the front end of the external flues of boilers of "Lancashire," "Cornish," and similar constructions, so that the joint may be visible, and the brickwork in contact with the plates is narrow, serious corrosion is not likely to pass undetected. In a number of instances the corrosion of the blow-out pipes hidden by brickwork involved stoppage of the boilers at inconvenient times. This would have been averted had these parts been properly arranged to permit examination. Other cases of dangerous corrosion occurred on the cross-walls, through slaking ashes at the front of the boiler—an objectionable practice, which is yet very common, and always liable to lead to injury of the boiler, especially where, as in some cases, the floor line is above the lower part of the end-plate, when it and the portions of shell adjacent inevitably suffer from corrosion, and expensive repairs become necessary. By the use of an iron barrow or other suitable receiver of the ashes from the furnace the practice referred to can be entirely dispensed with.

The most dangerous corrosion was, as usual, met with in contact with the seatings, especially where these were of excessive breadth. In one instance two "Lancashire" boilers were found dangerously thinned on the broad side seatings, and almost all the plates in contact therewith required renewal. In a number of cases when the brickwork in contact with plates was removed by request of the inspector serious thinning was detected. In some of these the corrosion was due to the boilers being imperfectly protected from the weather, either having a defective roof or none at all over them. In one instance the back end plate and angle iron of a "Lancashire" boiler were seriously reduced, and extensive repairs requisite through the above omission.

The inspectors often meet with considerable opposition when they suggest the removal of heavy brickwork in contact with the plates, either at the seating or at the upper part of boilers, or in order that flues may be rendered accessible, and the thorough inspections which are necessary to safety made; but in many cases where this course has been adopted the plates have been found most dangerously thinned. There is little doubt that timely discovery of defects averted explosion, whilst the state of the plates demonstrate that the face of any brickwork in contact with the plates of boilers should be as narrow as possible, that all flues should be accessible or be so arranged that the boilers can easily be thoroughly examined, and that all parts should be efficiently protected from external moisture.

Many parties hold erroneous ideas respecting the construction of brick flues. A very large proportion of the boilers used in this country are set in brickwork, but in many instances this is so badly arranged that the boilers cannot be completely examined, and their condition is a matter of mere conjecture; and corrosion frequently goes on at parts of the boiler which cannot be reached and examined, often involving disastrous explosion with destruction of life and property. Contracted flues not only prevent examination but also proper cleaning. The plates of the boiler become thickly coated with soot, and the flues are of such limited area that the draught is rendered defective; but if the boiler happens to be connected to a good chimney, and the draught is fairly good, the heat passes through the flues into the chimney at a rapid rate, and has very little heating effect on the boiler. A plan has recently been strongly urged upon public attention, and adopted by a number of firms, in which the flues are made very large and roomy, and although this may not have fully answered the expectations of some who have adopted it, or the claims of those introducing it, it has doubtless proved very advantageous in some instances where it has replaced defective contracted flues.

### LEGAL.

Supreme Court of Judicature.—Court of Appeal.—June 27.

(Before Lords Justices BAGGALLAY, COTTON, and LINDLEY.)

BARLOW *v.* THE VESTRY OF ST. MARY ABBOTT,  
KENSINGTON.

THE LINE OF FRONTAGE.

This was an appeal from a judgment of Vice-Chancellor Bacon restraining the defendants, the Kensington Vestry, from proceeding to enforce an order of the Hammersmith police magistrate made under section 75 of the Metropolis Management Amendment Act, 1862 (25 and 26 Vict., c. 102), for the demolition of so much of the plaintiff's house at the corner of the Kensington Road and De Vere Gardens as projected beyond the certified building line of De Vere Gardens. In 1875 the plaintiff became the owner of land in Kensington fronting north on the Kensington Road, nearly opposite the Broad Walk in Kensington Gardens, and bounded on the south by Canning Place, the Kensington Road frontage being then occupied by a small confectioner's shop, a public-house named at the time of the Great Exhibition of 1851 "The House of Call of all Nations," which occupied the space now forming the top of De Vere Gardens, and by the entrance of the Victoria Hunting Grounds. The plaintiff shortly after his purchase applied for and obtained the approval of the Metropolitan Board of Works to the formation of a new street, 58 feet wide, running across the land



from Kensington Road to Canning Place. This new street was called De Vere Gardens, and on the east side houses were built facing the street, and having a continuous line of front. On October 18, 1881, the building line of De Vere Gardens was defined by the certificate of Mr. Vulliamy, the superintending architect to the Metropolitan Board of Works. At this date the site at the north-east corner of De Vere Gardens was being built upon, and the house erected by the plaintiff which fronted the Kensington Road and abutted on De Vere Gardens projected 7 feet beyond the building line of De Vere Gardens. This house was nearly finished when the defendant vestry took proceedings under the Metropolis Management Amendment Act, 1862, section 75; and on January 24, 1882, Mr. Sheil, one of the metropolitan police magistrates sitting at Hammersmith, made an order, on the application of the vestry, for the demolition of the house to the extent of 7 feet from the inner line of the pathway in De Vere Gardens, and parallel therewith, so that the same should no longer be beyond the general line of buildings in De Vere Gardens. The plaintiff, who had sold the house in question to one Elsdon, and then taken a mortgage for a part of the purchase money, had in February 1883 obtained from Vice-Chancellor Bacon an injunction restraining defendants, the Kensington Vestry, from demolishing any part of the premises, his Lordship holding that the frontage of the plaintiff's house was in the Kensington Road and not in De Vere Gardens, so that it was not subject to the regulations of section 75 of the Metropolis Management Act, 1862, with regard to the general line of buildings in De Vere Gardens, and accordingly that the order of the Hammersmith police magistrate was *ultra vires*, and could not be enforced. From that decision defendants, the Kensington Vestry, now appealed.

Lord Justice Cotton, after stating the case, said that one question was whether the plaintiff's house was a "building, structure, or erection" within the meaning of section 75 of the Metropolis Management Amendment Act, 1862, which had been construed in "Lord Auckland v. the Westminster Local Board of Works," L. R., 7 Ch. App., 597, to apply only to buildings, &c., built or erected for the first time. No doubt the public-house called "The House of Call of All Nations" occupied a small portion of the site covered by the plaintiff's house, which was built upon what had formed part of the garden of the public-house covered with a trelliswork. But, in his opinion, this was a house built *de novo* for the first time upon what was at the time vacant ground, and not a mere rebuilding on the site and in right of a house or houses, as in Lord Auckland's case, which had previously occupied the same site. When the public-house was pulled down the ground became vacant ground, and all rights attaching to the public-house in respect of the building line were gone. The case, therefore, fell within section 75. It was then to be considered whether this was a building or house situated in De Vere Gardens, the plaintiff's contention being that it was a house in the Kensington Road, and not in any sense situated in or subject to the building line of De Vere Gardens; and in support of this contention it was said that a house could not be physically in two streets. This, however, was a fallacy. It was clear that houses might be partly in one street or square and partly in another, though referred to for matter of description as being in one only, and in this case, although as a corner house the house in question fronted upon and for purposes of description would be described as in the Kensington Road, it was also a "building, structure, or erection" in De Vere Gardens within the meaning of section 75. In his opinion, therefore, it was a new house built for the first time, with a portion of it in De Vere Gardens projecting beyond the main line of De Vere Gardens as defined by the general line of building sanctioned by the superintending architect, and the order of the Vice-Chancellor must, therefore, be discharged with costs, both here and in the Court below. The order, however, would not be drawn up for six weeks in order to allow the plaintiff himself to make the required alteration in the house in question.

Lords Justices Baggallay and Lindley expressed their concurrence.

#### Court of Session, Edinburgh.

(Before LORD KINNEAR).

BRUCE MILLER v. WM. HOLMS AND OTHERS.

AN ARCHITECT'S BUILDING SPECULATION.

The plaintiff or pursuer in this case is an architect in Renfield Street, Glasgow, and he sued Messrs. Wm. Holms, 40 Drumsheugh Gardens, Edinburgh; Archibald Campbell Holms, Hope Park, Partick; and John Holms, M.P., for Hackney, for 1,600*l.*, which he alleged was due by them to him. His statement was that by a minute of agreement entered into between him and the defenders, of date March 13 and 14, 1882, the defenders sold to him certain plots of ground situated near Govan Church, Govan, and agreed to assist in building upon the ground by giving him advances equal to 75 per cent. of the cost of the work executed, the sums so advanced to be repayable within six months after the completion of the tenements. The pursuer states that the advances made by defenders to him amounted to 5,750*l.*, and that having repaid the sum of 7,350*l.*, he had overpaid them the sum of 1,600*l.*, which they refused to return. The defenders averred in

answer that they had from time to time made advances to the pursuer, of which there was a balance of more than 12,000*l.* still due to them, and that the pursuer, on each advance being given, granted a promissory note at six months' date for the amount, and renewed the notes for other six months, when they fell due. They pleaded that the sum sued for having been paid to them at a time when they were creditors of the pursuer in a much larger amount, they should be assolvied. The pursuer explained that the claims put forward by the defenders in this action were wholly for advances in connection with other two feuing agreements, which were entirely separate transactions from the agreement founded on, and that the defenders were now in possession of the properties built upon the ground mentioned in these two agreements.

In dismissing the action, his Lordship held that the question of accounting was not properly raised here, and the action, so far as appeared on the record, was irrelevant. It was open to pursuer, however, to bring an action of count and reckoning.

#### NEW BUILDINGS.

**The Earl of Crawford and Balcarres, LL.D., F.R.S., F.R.A.S.**, last week publicly laid the foundation-stone of a large drill-hall at Wigan, 131 feet by 75 feet, for the 4th L.R.V. Messrs. Isitt & Verity, of Bradford and Wigan, are the architects. The cost is about 3,000*l.*

**Birmingham.**—A new soap works has recently been completed at Bissell Street, Birmingham, for Mr. John Pickering, from designs by Mr. Oliver Essex, A.R.I.B.A., of Birmingham. Messrs. Whitehouse & Jones were the contractors, the boiler, steam pans, tanks, &c., were supplied by Messrs. Thomas Piggott & Co., and the steam fittings by Messrs. M. J. Rice & Co., all three firms of Birmingham. Total cost, nearly 3,000*l.*

**Ryton-on-Tyne.**—The Ryton (Parish) Local Board are just completing their new cemetery works, at a cost of near 4,000*l.* Messrs. Salter & Lishman, of Ryton, are the contractors, and the works have been carried out from the designs and under the superintendence of Mr. J. D. Lish, architect, Newcastle-upon-Tyne.

#### GENERAL.

**Mr. Watts's Equestrian Figure of Hugh Lupus**, Earl of Chester, is to be placed in the open space at the west front of Eaton Hall.

**Mr. Arthur B. Plummer, A.R.I.B.A.**, Newcastle-on-Tyne, has been appointed architect for the new church of St. Jude, to be built in the district of Shieldfield.

**The Design by Mr. A. E. Davies Colley**, of Manchester, for the Hulme Boys' School, has been adopted by the Governors on the recommendation of Mr. E. R. Robson.

**An Exhibition of Plate, Jewellery, Art Metal-work, &c.**, was open during the week at 30 Cadogan Square. The proceeds are to be applied to the Girls' Friendly Society.

**A Memorial Window** is to be erected in Westminster Abbey, in recognition of the services rendered to engineers by the late Sir William Siemens. The cost will be about 800*l.*, and is to be derived from subscriptions of one guinea.

**Mr. B. T. Batsford** has issued a new catalogue of fourteen hundred works relating to architecture, sculpture, painting, and decoration. It is so arranged as to allow of ready reference, and, as the works are selected with care, it forms a handy guide to English and foreign professional literature.

**Mr. Henry Carr, C.E.**, delivered a lecture on "Domestic Poisons" on Monday at the Health Exhibition, in which he explained the dangers arising from the presence of arsenic in wall-papers and domestic fabrics, to prevent which a Bill had been drafted the provisions of which were not more stringent than those already in force in Germany, Sweden, and other countries. Several specimens of paper-hangings were exhibited in pairs representing arsenical and non-arsenical colours of very nearly the same shade.

**Association of Municipal and Sanitary Engineers and Surveyors.**—The annual meeting of this society commenced on Thursday at Newcastle-on-Tyne. The programme included papers on "Inspecting and Testing the Sanitary Arrangement of Houses," by Mr. J. P. Spencer; "Steam on Tramways," by Mr. James Hall; "Sewage Disposal," by Lieut.-Colonel Jones; "The Cost of Local Government and the Distribution of Funds," by Mr. F. S. Brunton. It is proposed that henceforth civil engineers holding chief municipal appointments in Scotland and Ireland, in the Colonies, or foreign countries, shall be eligible for election as members.

**Mr. Benton Gibbs**, St. James's Works, Mill Street, Liverpool, was awarded the silver medal for his patent heating apparatus exhibited at the recent Agricultural Show, Birkenhead.

**The Foundation-stone** of the public baths which are being erected from the designs of Mr. Lawrence Booth, of Manchester, for the Salford Corporation, at Pendleton, was laid on the 26th ult.









*Harmony Welcoming the Nations*  
By M<sup>rs</sup> Charles Joseph Lamora



# SUPPLEMENT

TO THE

# ARCHITECT.

LONDON, JULY 5, 1884.

## THE INTERNATIONAL HEALTH EXHIBITION.

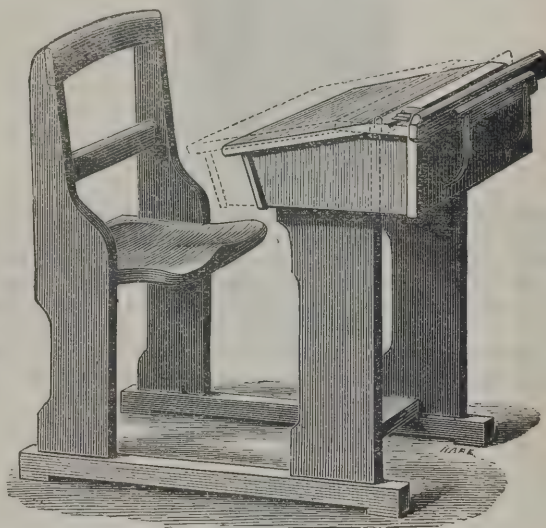


THE Health Exhibition may now be considered to have become as perfect as the projectors anticipated. The opening of the new building of the City and Guilds of London Institute has added a new and important feature to the exhibition, and both within the building and in the grounds there are novelties to satisfy the most exacting visitor. The fine weather has enabled large crowds to enjoy the evening promenade and listen to the competition between the German and English bands. There is of course a tendency to convert the exhibition into a mere show, but it would be a bad return to make the exhibitors for their trouble and expense. There is now an opportunity at South Kensington to study sanitary appliances such as may never again arise, and in the hope that it may be turned to account we continue our notes on the most useful among the exhibits.

*Mr. George M. Hammer.*

The exhibit of Mr. GEO. M. HAMMER, 370 Strand, the extensive manufacturer of school fittings and furniture, in the Albert Hall, is the largest in these classes, and would have been still more comprehensive had space been obtainable. Mr. Hammer has for some years devoted much time and thought to the question of school furniture, and has made it a complete speciality, attaching it to his other branch of manufacture, that of ecclesiastical furniture, with which it works in an harmonious manner. Taking the exhibit as he intends it to be illustrated, we have furniture for the infants, consisting of low desks and seats, formed so as to be the best adapted for writing for children of such tender years, as well as for Kindergarten work, and there are Kindergarten tables made to slope, useful alike for child or teacher. The second grade fittings are for children who have advanced beyond the infant stage, and consists of desks and seats with backs convertible in the most easy manner into tables. While giving sufficient room for school work, there is nothing in their construction to induce children to lean forward, their bodies being kept in an upright position, but with a "rest," so to speak, at front as well as back. Advancing to the third grade of pupils, Moss's dual desk and seat is the one made use of, Mr. Hammer being the sole proprietor and maker of the invention. This appliance is in use in the London schools and in a large number of School Boards throughout the country, and we are informed that nearly a quarter of a million have been sold up to the present time, which is alone a sufficient guarantee to warrant us in speaking of it in terms of high commendation. It was devised after careful investigation and study, and with the advice of eminent authorities, the aim having been to produce an article thoroughly adapted to School Board use. The desk-top presents a smooth surface 14 inches wide, free from awkward projections, with the necessary appendages of ink-wells, grooves for pens, &c. When not required for use in its normal position, the front portion of the desk-top can be thrown back to form an inclined book, music, or drawing copy rest. Ample room is also left between desk and form for drill or other exercises. A separate compartment is provided for each scholar in which to place his school materials, and these are open to the eye of the teacher. Besides the back to the form, an inclined foot-rail is fitted to every desk, affording proper rest to feet and ankles. Beyond these features the position of the desk-top has been regulated to prevent stooping, and to prevent undue pressure upon the chest. There are other matters in connection with the Moss desk and seat worthy of inquiry into by those whose requirements lead in this direction, which the prospectus published by Mr. Hammer will give them, and this brings us to consider the appliances made for high-school teaching. Here separate desks

and seats for each pupil are the approved plan, and we are shown the "Louise" for girls and the "Albany" for boys. These are made to slide for girls, enabling free egress or ingress to be obtained, and for the boys the seats turn up to a level with the back for this purpose. An engraving of one of these



is here given. Miller's class drawing models, as adopted by the Science and Art Department at South Kensington, are also shown in complete sets, and a selection of smaller models also, all of which are manufactured by Mr. Hammer. Then we have a variety of different pattern drawing-desks, and tables and desks for teachers, &c., of the most approved construction. Amongst the latter the visitor can scarcely fail to notice a finely-marked table of polished pitch pine with drawers and cupboard, which will repay a few minutes' inspection. In the new Technical College in Exhibition Road, Mr. Hammer has sent a collection of school fittings as used in the college at Ealing for the education of the deaf and dumb. These are made in the form of segments of circles, in accordance with the mode found by experience to be best adapted for those poor sufferers. In the iron building erected adjoining the exhibition as a test-house for the jurors, in prosecuting their examinations of the different foods, &c., on which they have to adjudicate, Mr. Hammer has lent the whole of the required fittings, such as fume-closets, microscopic tables, &c., and he may fairly be said to be a most important contributor to the exhibition.

*The Indestructible Paint Company.*

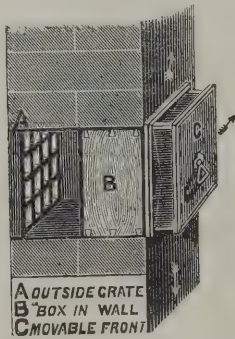
At 870 the INDESTRUCTIBLE PAINT COMPANY, 27 Cannon Street, are exhibiting that valuable preparation known as Browning's patent invisible preservative solution, and also Browning's patent enamel paints. The important advantages of the solution, which is unequalled for coating stone, marble, brick, cement, plaster, &c., can scarcely be over-estimated, for the materials coated with it are not only rendered effectually damp-proof, but, what is of equal if not more importance in the case of stone and marble, are quite secure from the deleterious effects of an atmosphere surcharged with carbonic acid and sulphurous vapours as that of the metropolis and other large cities is. Mention has been made on previous occasions in the columns of *The Architect* of important works in which it has been used, amongst them being Cleopatra's Needle, and though more than five years have elapsed since the solution was applied to it, a recent examination shows it to be as clean and fresh as when it first took up its abode in this



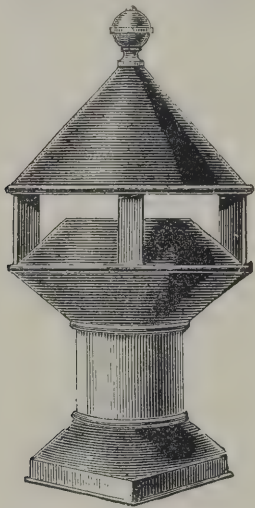
murky atmosphere. An example of the waterproof virtue of their enamel paint is seen on a specimen of plaster that came away bodily from the wall of the Ocean Marine Insurance Offices, that, being damp, had been coated with it, but instead of the moisture causing the paint to perish or otherwise damaging the surface, the paint stood its ground, and the water, as we have mentioned, found other means of exit. Some very delicate tints are shown which meet the demand for the neutral and low tones so much in vogue.

*Mr. Ellison.*

At Stand No. 717 Mr. ELLISON, Victoria Square, Leeds, has taken up his position, and is showing his patent "Conical" and patent "Radiator" ventilator, and the patent exhaust ventilators and chimney-tops known as Stevens's patent. The principle of the conical ventilator is applied chiefly to perforated bricks and air-grates, and as such forms the most perfect of the kind in the market. These air-grates are constructed with conical or wedge-shaped openings tapering larger to the inside, by which means the incoming current of air is so effectually radiated and diffused that draught is avoided. The same principle is seen in the "Radiator," of which we give a sketch, though its construction is different. It



is composed of a flat disc, having behind divisions placed cross-ways, which on closing the ventilator, slide into a box fixed in the wall. These divisions form, as it were, wedge-shaped compartments, and so disperse the incoming air in all directions, and effectually prevent any draught. The amount of air to be passed through is easily regulated, and they can also be supplied with screw movement and loose key for public institutions. The following sketch depicts Stevens's patent exhaust ventilator, also made



by Mr. Ellison. This is a very simple and efficient apparatus, and is so well known that but little comment from us is necessary. As will be seen from the engraving it is of the fixed kind, and is so constructed that at whatever angle the wind strikes the cone, a partial vacuum is created in the chamber under the hollow cap, and a powerful upward current secured.

*Messrs. J. L. Bacon & Co.*

At 1,137 Messrs. J. L. BACON & CO., of 34 Upper Gloucester Place, Dorset Square, N.W., are showing in action their system of heating and ventilation, and will well reward examination. Most of our readers are aware from previous allusions in the columns of *The Architect* that this firm were the first to introduce a tube of special diameter and thickness, of which our illustration gives a view. The apparatus consists of these specially-manufactured wrought-iron tubes, the strength and flexibility of which is shown by a coil surmounted by a double knot of pipe, on which there is a gauge, showing a constant pressure, on the whole, of 4,000 lbs. per square inch. The tubes are provided at the ends with right and left-handed screws, and are connected together by means of sockets similarly screwed, which draw the ends together and force them

one into the other, making a perfectly sound hydraulic joint. This joint is not at all affected by expansion, and offers the further advantage of allowing any tube to be disconnected and removed without the least disturbance to the rest. The larger portion of these tubes form the heating surfaces and connections of the apparatus; the remainder, an exact and fixed proportion, built in a furnace at the lowest level, takes the place of the ordinary boiler. The apparatus, therefore, consists of an endless circuit of tubes, all of the same diameter. The most important advantages of this system are ease of application, durability, heating capacity, and incongealability. The first three are brought about by the method of fixing the apparatus and the special make of the tubes, as already described; and the latter is due to the substitution of a patent non-freezing solution for ordinary pure water. This overcomes the necessity of maintaining fires during excessive cold, whether otherwise required or not, to prevent the water in the pipes freezing; and, in addition, the solution once in the tubes serves for an indefinite period without losing its effectiveness, since it neither decomposes, precipitates, nor evaporates under the action either of heat or cold. The specimens of coil-cases and ornamental gratings are of excellent design, and show how the apparatus can be made a handsome addition to the decoration of a house. Besides these Messrs. Bacon & Co. show several methods of applying their apparatus to schools and other public buildings, as well as plans of buildings they have heated and ventilated, from which we gather their system very readily adapts itself to any kind of structure. Among the systems of ventilation this firm carry out is one that is largely adopted on the Continent for large buildings, and consists in extracting the vitiated air by means of a fan worked by a gas-engine, while the fresh air is warmed before entering by passing over the hot-water pipes.

*Mr. R. Adams.*

At Stand 386 are to be seen a number of appliances of which it is only fair to say that, their advantages being once known, few would be without. Mr. R. ADAMS, of 17 Blackman Street, Borough, S.E., is the patentee of a variety of improvements in that somewhat insignificant though indispensable class of household fittings comprised under the generic term "sash-fastener." Any attempt at perfection combined with simplicity and security, not to mention automatic action, in the manufacture of these articles has until recent years been a feature much overlooked; not that we wish to deprecate the numerous patent sash-fasteners, pure and simple, that have from time to time appeared, and some of which are highly ingenious, for we refer rather to contrivances for allowing ordinary sashes or casements to be open a certain space for ventilating purposes, and which at the same time allow no opportunity of being tampered with or further opened from the outside by the burglar. Of these that deserve special mention there are shown the patent sash-bolts and ventilators, patent casement stays, patent rack fanlight-opener, patent secure fanlight-opener, and patent "Triumph" burglar-proof sash-fastener. The Norton door-check and spring, and the patent reversible and sliding window-frames should not be passed over. The special features of the former are that immediately the door is let go after opening it, it closes by the action of the spring, but quite noiselessly; should the door be slammed to, the action of closing is equally noiseless. It is brought about as follows:—The device besides the spring consists of a cylinder, piston, and self-adjusting valve, and is attached to the top part of the door and door frame. The "check" is caused by the cushioning of the piston on air, which brings the door to a stop for an instant near the jamb, then quietly closing and catching it by the operation of the spring, being regulated by the automatic valve, which permits the air to enter the cylinder freely while opening the door, and while closing exhausts the air, more or less, as the force exerted on the door to close it is greater or less. The patent reversible and sliding window is a simple method of removing the sashes from the ordinary vertical position, to facilitate their being properly cleaned from the inside; it has now been before the public for some time, and, we believe, gives general satisfaction.

*Messrs. Waygood & Co.*

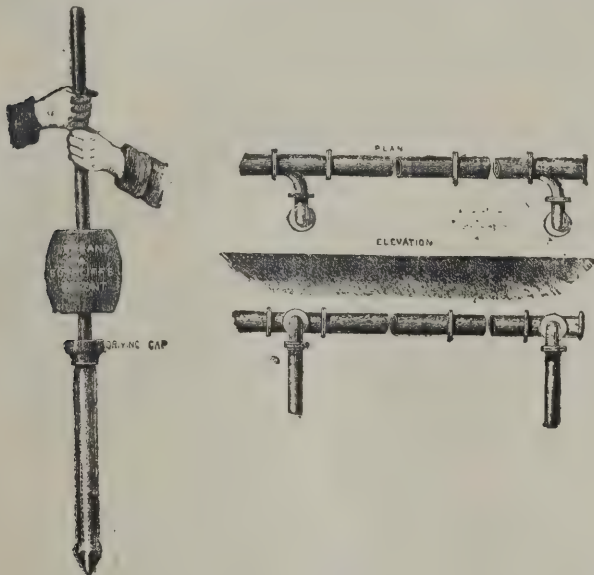
At Stand 1,136, in the machinery in motion gallery, Messrs. WAYGOOD & CO., Falmouth Road, S.E., are showing their patent lifts in action. They comprise a patent hydraulic balanced passenger lift, so constructed that balance weights, &c., are dispensed with; a patent steam-power lift for passenger or warehouse use; a hand-power warehouse lift, and a double dinner lift. The hand-power warehouse lift is fitted with patent self-sustaining brake, by which the load is held stationary when the hauling rope is released, and patent safety apparatus to prevent the cage from falling in case of the lifting rope breaking. This contrivance is admirably adapted to serve such purpose, and is as simple and effectual as possible. It acts as follows:—On each side of the cage or box are securely bolted two wrought-iron plates, having in each a vertical slot in which the cross bar at the top of the cage works, and until this reaches the top of the slot, the cage is not lifted. Directly this position is reached it distends the four cams that are situated two on each side, so that they just clear the wood



or iron upright. In the event of the rope breaking the bar drops of its own weight, and is accelerated and made more sure by two strong springs upon the cams. These immediately grip the uprights, and keep the cage in suspension. The steam-power lift is worked by two driving bands, one to send the lift up, the other to lower it, which secures the utmost uniformity of action. Another advantage is, that the gearing is so constructed that the rate of speed having been once determined is not under the control of the attendant, but is perpetually adhered to. The patent self-sustaining gear can be applied to any existing lift, and from its efficiency and reliableness is well worth attention. A patent portable self-feeding drilling machine for hand or power is also shown, and appears to possess no inconsiderable advantages.

*Messrs. Le Grand & Sutcliff.*

No. 458 is occupied by Messrs. LE GRAND & SUTCLIFF, 100 Bunhill Row, with a collection of Abyssinian and artesian tube wells and pumps (Norton's patent), diving and boring apparatus, and horizontal mains, with connections, &c., for same. This is another exhibit that may be looked upon as one of the most legitimate, and is at the same time very interesting, for it is not generally known that this system is as available for supplying the smallest domestic wants as for providing the large quantity of water for town waterworks, breweries, and other manufacturing purposes. As a proof of this, we may mention that in many places where the inhabitants are dependent upon the common pump, often not sunk more than 15 to 20 feet deep, for their water supply, and where the cesspool still does duty for drainage, landlords have in several instances supplied their respective tenants with water from a depth beyond all possibility of contamination from the latter, by the use of these Abyssinian tube wells, and at a less cost than for sinking an ordinary well. This firm have always been very closely, almost exclusively, associated with this branch of hydraulic engineering, and have done much to develop it; and amongst the appliances here shown is a patent driver just recently



patented, which is well worthy of attention. As a glance at the sketch we give of it will show, it does away with ropes and pulleys, the pipes being driven by two men raising the "monkey" and striking it down on the cap, merely taking care that the pipe is kept perfectly perpendicular. The other sketch shows their horizontal mains in plan and elevation for connecting a series of tube wells, it being the most simple and effective method of conveying a large supply of water to one reservoir or receiver.

*Messrs. Bowes, Scott & Read.*

Mr. Roger Field's syphon flushing tank, in model, is exhibited by Messrs. BOWES, SCOTT & READ, Broadway Chambers, Westminster, and the self-acting annular syphon is shown in connection with a flushing cistern holding 1,100 gallons. Mr. Field's flush-tanks in cast iron and earthenware are, in addition, on the stand. The firm's patent latrines in enamelled earthenware, salt-glazed ware, and cast iron, and their enamelled earthenware trough-urinal, all fitted with Field's syphon for automatic and periodic flushing, form an exhibit worthy the attention of all public authorities or large employers of labour. The principle of Mr. Field's syphon is so well known to the profession and builders generally that further details respecting it would be superfluous.

*Mr. P. A. Maignen.*

Mr. MAIGNEN, of Great Tower Street, plays an important part at this exhibition, not only as an exhibitor, but as an administrator to the comforts of those who are "athirst," and can satisfy themselves with a draught of the "pure pellucid stream," for in various

parts of the grounds he has erected tasteful little edifices, forming water filters on a large scale, on the principle of his "Filtre Rapide," from which pure fresh filtered water is constantly dripping. In another part he has erected a village pump, so arranged that every drop drawn shall be filtered; and attached to this is a balanced tip-up trough for horses and cattle, the water that is admitted to this being also filtered. The advantage of the tip-up trough is that, when an animal has drank, the balance-weight will overturn the trough, and so empty it every time it is used, which provides for a fresh clean draught for the next comer. That this filter is gaining a popularity never reached by any other is quite patent, and the extraordinary changes he effects with various liquids after passing them through his filter is extraordinary. Wines and chemicals of various colours are rendered perfectly white and tasteless, and in one instance we saw a mixture of sewage water and acetate of lead returned to the glass clear and sparkling, which was drunk by one of his assistants. These filters are made to suit all requirements. The appended illustration represents a domestic filter, showing a portion of the interior. All the parts are loose, and each can be taken out for cleansing. The following is the mode of arranging the filtering media, which is composed



partly of fine powdered charcoal and partly of granular. An earthenware perforated cone has a cover of asbestos cloth, the reservoir holding the unfiltered water, in which this is placed, being partly filled with granular charcoal. This reservoir is nearly filled with unfiltered water, and the necessary quantity of fine powdered charcoal is mixed with some water and poured into it. Filtration now begins. The contents of the reservoir and entire black mass gradually pass through the asbestos cloth, leaving the charcoal in the form of a compact coating on the asbestos. The granular charcoal arrests all the heavier bodies that the water may contain, and whose weight would carry them downwards, and the smallest living organisms are prevented from passing through the covered cone, which is the only inlet to the reservoir for filtered water. Mr. Maignen also aerates the water by providing a tube through the centre of the filter to the lower reservoir, and the insertion of a small portion of cotton wool in the top of this tube secures the purification of the air so entering, and prevents dust, &c., from entering. In the ambulance department Mr. Maignen shows the different specimens of his filters suitable for the camp, or an army on the march, which have been adopted by the War Office, and have lately been used in the Egyptian campaign, and in this direction his invention is likely to prove a great boon. But the inventor aims at still higher gain, and has demonstrated clearly that by means of his system of filtration he can filter the entire water supply of the metropolis, or any other town, more effectually, at a much smaller cost, and with a mere minimum of space as compared with what is now required by the different water companies; in fact, the system has been tried on a small scale by one of the London companies with very satisfactory results. At his stand in the south gallery he exhibits a large drawing, illustrating the principle on which he bases his ideas. Should this ever be carried out in accordance with Mr. Maignen's views, it would be the means of liberating a large amount of land now used by the companies as filter beds, which they could utilise for other purposes, even for building upon, which would return them a considerable income.

*Messrs. Crouch & Jay.*

At 442 Messrs. CROUCH & JAY, of Maroon Street, Limehouse, E., are located, and contribute a very useful though an uninteresting looking collection of galvanised and patent wrought-iron cisterns

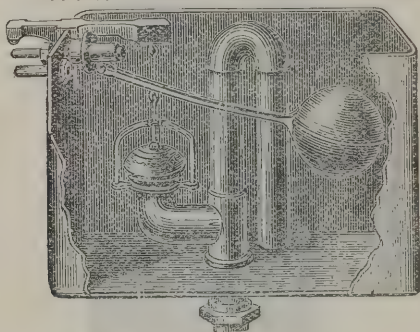


and tanks. In these days when modern villas of the most ordinary description are fitted with hot and cold water service to the bathroom, there is a large and constant demand for such articles, especially for the hot-water circulating cylinder; so that it is very necessary to know where thoroughly reliable and carefully-tested apparatus can be obtained, as explosions are as often due to the inferior quality of these as to other causes. Messrs. Crouch & Jay's goods being well made, and turned out at a very moderate price, are in large demand; they nevertheless hold a considerable stock at the above works, and can execute the orders the day afterwards.

*Messrs. Bolding & Sons.*

At Stand 539, east annexe, Messrs. BOLDING & SONS, South Molton Street, have contributed a collection that tends materially to render this section a complete and representative one. The exhibit comprises one or two handsome baths, fitted in rich and elegantly carved cabinet-work, and with the firm's new registered bath levers; a large variety of closets in different qualities, including the "Simplex," Grosvenor, and Argosy "valve" closets, the National, and the Crown "wash-out" closets; a selection of hot water-cocks, fire-cocks, hose pipes, hose unions, and other water fittings; drawn lead traps and other plumbers' fittings, including some remarkable specimens of the skilled plumbers' handicraft, in the shape of lead piping bent into traps, &c., and a patent "Bottle" trap. This trap is specially suitable for kitchen and butler's pantry sinks, as it effectually prevents the escape of sewer-gas, and the seal is so complete that it cannot be broken by syphonage. The dip can

"SYPHON" WATER WASTE PREVENTER



be removed at will to facilitate unstopping, while a cup is provided to prevent any foreign matter passing into the pipes. The diagram which we give represents Bolding's seat action, syphon water-waste-preventer flushing cistern. The salient feature of this, and the difference between it and a similar one the firm make is, that when the seat of the closet is depressed the lever is drawn down, but upon the user rising, the weight of the lever falls and opens the valve, when the water is discharged with such a force through the syphon as to thoroughly wash away the contents of the pan. In addition to this display in the eastern annexe, Messrs. Bolding have a special collection in the water companies' court of goods, some of the companies largely using their make, a fact that speaks very significantly for the reputation in which this firm's work is held.

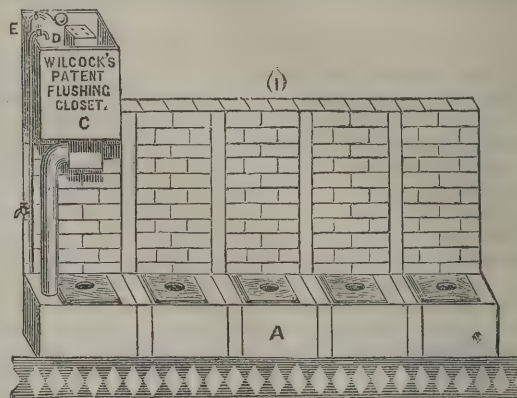
*Messrs. Steel & Garland.*

This firm, of the Holborn Viaduct and Sheffield, are in close proximity, and have been fortunate in securing two stands. The exhibit, like the others before named, consists entirely of suites for the fireplace. The mantelpieces here are of marble and wood. Amongst the latter we may mention a black ebonised mantel and over-mantel, the slab underneath the mantel-shelf being composed of panels in bronze representing the seven ages of man, and by the side of this, bringing both suites out to the best advantage, is a charming Sheraton mantel and over-mantel, with a dog grate, and the usual accessories. The grates connected with smoke consumption are the now well-known "Wharnclyffe" and the "Kensington," shown for the first time at the Smoke Abatement Exhibition, and which was awarded the gold medal.

*Messrs. Wilcock & Co.*

Just behind Doulton's pavilion, on the left hand side, will be found the attractive exhibit of Leeds faience contributed by the well-known firm of WILCOCK & CO., Burmantofts, Leeds. This exhibit consists of architectural faience for decorative purposes in construction, and a great variety of independent, ornamental articles for domestic decoration, amongst which vases and stands form a commendable portion. Elegant mantelpieces, fireplaces, kerbs, &c., comprise another section, and there has been built up a noble porch with circular roof, that is of itself worth a visit to this stand, and it is almost unnecessary to add that the workmanship is of a high order of merit, and the colours of fine tints. Any person who has had the advantage of going over Messrs. Wilcock's works cannot but bear testimony to the care employed in the manufacture of all their productions and the skill of the artists employed in the decorative departments. But apart from the artistic features which, in a very few years, have won such a

reputation for the firm, Messrs. Wilcock & Co., are quite capable of holding their own in the common kinds of clay goods, their bricks both plain and colour glazed, being equal to anything of the kind made. Blue bricks are also a speciality, and are made of a particular mixture of clay, fashioned by hand, and fired at a welding heat. Their drain-pipes and other sanitary ware are well known to be, both as regards quality of clay and general manufacture, second to none in the market. One of the best productions in this class of goods, of which a sample is shown, is Holroyd's patent glazed stoneware trough closets or latrines, of which we give an illustration, intended for the use of schools, factories, and kindred places where large bodies of people are



daily congregated. They are made of fine, glazed stoneware, open throughout along the bottom, and are flushed at periodic times by means of a large, syphoned cistern, which sends such a powerful body of water along the channel that every atom of solid matter is entirely carried away to the drain at each flush. With the walls built up of glazed bricks, a hose-pipe can be brought into play to cleanse the entire building in a few minutes. These closets are being extensively fitted up in many parts of the kingdom.

*Messrs. Farmer & Brindley.*

Stand No. 868 is one that should be seen by all professional men as well as by builders and others, for here are gathered together, in a small space that enables a ready and easy inspection, an assortment of the choicest and rarest kinds of marble that have ever been quarried—an assortment which we believe it would be impossible to equal either in richness or variety. The exhibitors are Messrs. FARMER & BRINDLEY, Westminster Bridge Road, and when we mention that each specimen they are showing represents many tons, and in some cases thousands of tons of stock at their yard, it will be admitted that they hold a unique position. It will be obvious that any written description would fail to give an adequate idea of material whose *virtu* is dependent upon a freak of nature, and no two specimens of which are exactly alike; but we append the names of some of the kinds that more particularly impressed us, and all those who either specify or use marble, whether for columns, enrichments, wall panels, or pavements would, as we have before remarked, be making good use of their time to pay a visit to this stand in the exhibition, or the firm's show-rooms at the above address. The rediscovered "Cipollino" marble is imported solely by Messrs. Farmer & Brindley, and is represented by two beautiful slabs of the bright and dark variety. "Pavanazza" is a marble they also hold a large stock of, and the specimen shown is exceedingly rich; and less cannot be said of the samples of "Africano," and Egyptian porphyry, while the Onyx, Mexican Onyx, Crocidolite, and Labrador spar can scarcely be too highly eulogised, and are such specimens that one rarely meets with. Last, but not least, are some slabs of Tyree marble, introduced by the Marquis of Lorne, which the firm have taken up on his behalf, and as it has a good appearance, will probably soon come into general demand, though it has hitherto been little known in this part of the country.

*The Coalbrookdale Company.*

In the approach to the east gallery stands the principal exhibit of the COALBROOKDALE COMPANY, of the Holborn Viaduct and Coalbrookdale, Shropshire, the articles shown consisting of mantelpieces and overmantels in iron, grates, kerbs, and their accessories. The iron mantels and overmantels are undoubtedly the principal features of attraction here, and they form the last speciality in domestic furniture in the long list of decorative articles in iron introduced by the Company. These chaste productions first saw light at the Smoke Abatement Exhibition, held here some three years since, when their delicate lines deceived every one who saw them, and great was the surprise when the visitor was informed they were made of iron and not wood. Since that date the idea has been greatly developed, and many other patterns have been added, the talents of some of the best known designers having been secured for the work. Amongst the designs shown on the present occasion are some examples by Mr. W.



Scott Morton and Mr. R. Norman Shaw. The bulk of the designs may be said to favour what has been popularly called the Queen Anne style, but embracing also the Adams, Chippendale, and Jacobean, and, in fact, those styles that were mainly in vogue during the reigns of the Georges; but many of them are toned down, so to speak, and, if we may use the expression, of a more modernised appearance. They are painted in low-toned colours or neutral tints, and one of their great recommendations is that, notwithstanding their high artistic worth, their cost is considerably less than that of any other material. The grates consist of the various patent ones made by the Company, and include the Whitwell "save-all," the Kyrle, the Holland, Millner, and others of chaste designs not claiming any particular speciality in their general construction. As we have described most of these on former occasions we need not repeat details here. It is almost needless to add that every article displayed bears the impress of that superior finish attaching to everything that emanates from the Coalbrookdale Company's *ateliers*. In the vestibule of the exhibition are to be found a collection of their best garden seats, lent by them to the executive for the convenience of the visitors. It needs no inquiry on the part of those who have any knowledge of the finished iron productions of the country when looking at these seats, as a mere look at them will show that they carry the impress of Coalbrookdale in them; and the fountains erected by the water companies have been supplied by the Coalbrookdale Company.

*Messrs. Barnard, Bishop & Barnard.*

Adjoining the Coalbrookdale Company is the stand of this firm, of Queen Victoria Street and Norwich, who in connection with the grate trade, it will be recollected, made a great sensation a few years since with their "Parson's" or slow-combustion grate, the "lines" of which have since been adopted by other makers. Many of our readers will remember the handsome display made by this firm at the late Smoke Abatement Exhibition, and the "Glow" shown on that occasion. It is somewhat remarkable and has been brought very forcibly to our notice by a recent circular published by the firm, that this grate, which compared very favourably with others that were tested, received no award; and they naturally ask "on what ground, or by what line of reasoning could the judges arrive at their awards?" There are some very handsome suites in this exhibit, a prominent one being that designed by Mr. J. R. Pearce, F.R.I.B.A., of Norwich, for a mansion of Mr. Samuel Hare, at Cromer. The design is from Dutch decoration, and includes a dog-grate principally of wrought-iron and brass; tiles of Dutch manufacture are exclusively used, and the mantel is of teak wood, the whole presenting a unique appearance. The grates shown comprise some very handsome features, and in the smoke-consuming class will be found the "Glow," before mentioned, and a new open grate, with an angular-formed fire-basket of fire-clay with a "baffle" above it, which is said to perform its duties exceedingly well as a non-producer of smoke; but we have not yet seen it in action. The accessories connected with each of the suites evince the same good taste as in the principals, and the whole represents a very attractive exhibit.

*Mr. H. W. Cooper.*

Attempts have of late years been made to coat iron piping with glazed substances to prevent the iron from oxidising, and to keep the water or other liquids passing through them pure. The latest introduction in this direction hails from America, and takes the form of glass-lined wrought-iron piping, which is shown by Mr. H. W. COOPER, of Wimpole Street, W., at Stand 464. The advantage claimed for this piping is that, from its perfectly smooth surface, water or other liquids passing through it flow more freely and at a more even temperature, and in the same condition as when it left its source. It is also strongly recommended for chemicals. We cannot expect that piping of this description can ever be used for our large water-mains on account of its price, but there are innumerable uses, where cost is not of much consequence, to which it may be adapted with much advantage, and from a sanitary point it has much to recommend it.

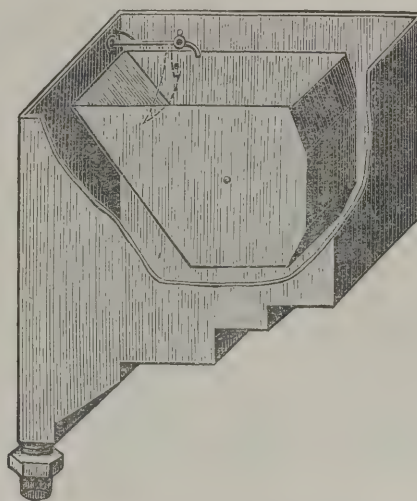
*Messrs. R. Houghton & Co.*

This firm, whose address is 21 Sloane Terrace, S.W., have recently come to the front with some simple but meritorious sanitary appliances. They are patented inventions, and comprise a fat interceptor, made in various sizes, a stable gully, and another for baths, sinks, surface drains, &c. They are the outcome of long and practical experience on the part of a patentee, and serve their purposes remarkably well. No better tribute can be paid to their value when we say that in certain systems of drainage we have seen exhibited in different parts of the country, the Houghton fat interceptor and gully have been shown as part of the arrangement. The firm in addition exhibit examples of faulty plumbers' work, collected by them from different sources where they have reorganised the system of drainage, showing the fatal mistakes often made by inexperienced and unprincipled workmen. Although this collection comprises work executed years ago, when but little attention was paid to sanitary science, the firm show that we are

not exempt from similar dangers at the present day, a specimen of new work being on the stand, recently removed by Mr. Houghton from a mansion in Eaton Square, and this is widely made known as an example of the "jerry" work indulged in by some workmen of the present day. Mr. Houghton also shows several plans of works recently laid down by him; one of which, just completed at The Villa, Effingham, Surrey, is worth a few minutes' attention by any architect or builder who may pass by his stand. We shall not attempt to describe it in detail, but content ourselves in saying that the house is said to be now sweeter and purer than at any time since it was first inhabited.

*Mr. J. B. McCallum.*

The borough engineer of Blackburn, Mr. J. BRADDON MCCALLUM, A.M.I.C.E., exhibits specimens of his tipping tank waste-preventing cisterns, of which we append an illustration. These cisterns are arranged to suit all requirements. They can be applied in connection with the seat action of a closet, the pull action, or may be set to work automatically for discharging water at any given time, and are as efficacious for urinals as for closets. On reference to the drawing, the action will be understood at a glance.



It is simply poised in such a position that when the water reaches a certain level it cants over and discharges its contents in full volume. It will be seen that there is no ball-cock, outlet-valves, or syphons, and that its construction is of the most simple character. We have no objection to syphons when attached to water waste-preventers, but the tipping tank appears to us to offer the most simple mode of flushing under any circumstances, and it is difficult to imagine how it can be placed out of order, and its price should be less than in any other where mechanism is employed.

*Messrs. R. Anderson & Co.*

No. 459 is a Stand that should not be overlooked. The exhibitors are Messrs. R. ANDERSON & CO., Duke Street, Liverpool, and they have sent a most creditable assortment of high-pressure water taps and fittings, bath fittings, copper circulating cylinders, copper bath boilers, lift and force pumps, &c. In one and all of these articles it is clearly apparent that they are made for wear, though in saying this it must not be supposed that finish or appearance has been lost sight of, but as it should be, is looked upon as a subservient feature, so that we have here thoroughly sound and reliable work at a moderate price. A convincing proof of this is seen in the Liverpool Corporation Waterworks having used the fittings of the firm for the last twenty-five years. Messrs. Anderson & Co. are also showing an improved safety-valve for the prevention of boiler explosions, which is worth attention.

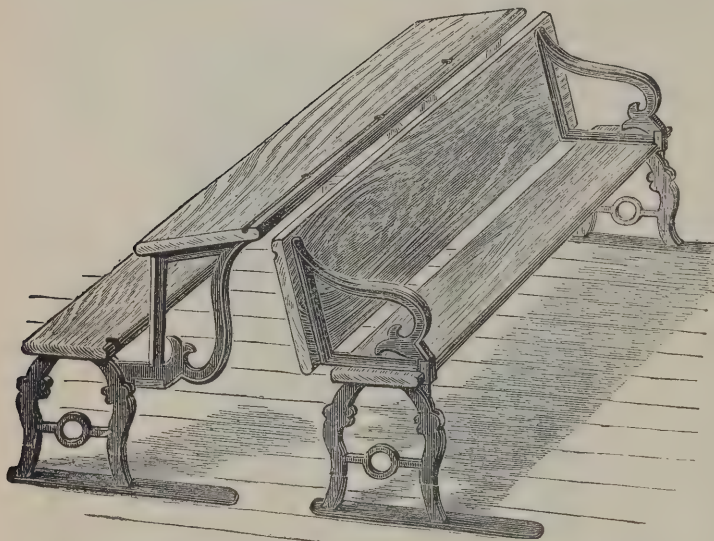
*The Birmingham Sanitary Association.*

At No. 479 the BIRMINGHAM SANITARY ASSOCIATION, 28 Upper Priory, Birmingham, are located. This association, situated as it is in the above town, is the principal agency in the Midlands for the most approved sanitary appliances, and is the representative in this large district of most of the leading London and other firms. In addition the association are the sole licensees for the United Kingdom of a patent trap known as "Potts's Patent Edinburgh Sewer Trap," and it is this that brings them to the present exhibition. It is shown in several sizes, and on inspection will be found to possess many unique features, amongst the most important being that it allows for the total disconnection of house drains from the main sewer, and may be said to answer the purpose of a brick-built intercepting chamber at a much less cost, while a grating which provides for the admission of fresh air to all the pipes fixed above it is of almost equal advantage. Full-size diagrams are also shown at the stand, whereby one may readily judge of its efficiency when in actual use.

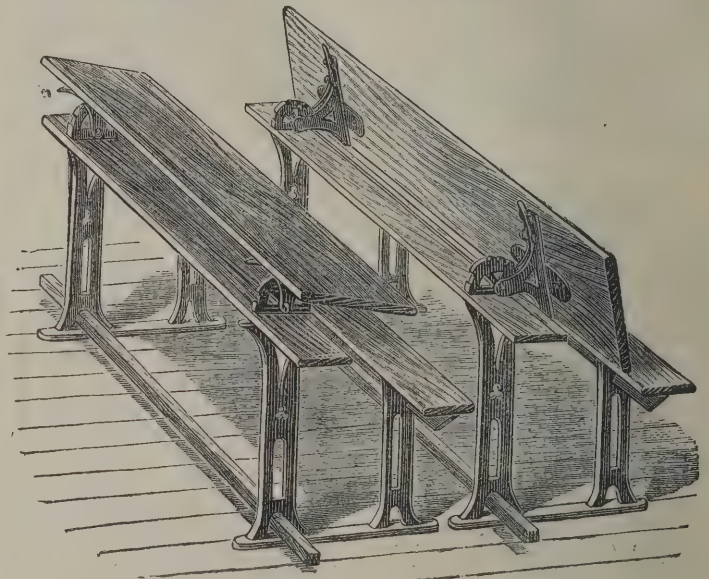


Prize Medal, London, 1862; Silver Medal, Paris, 1878.  
PRIZE MEDAL, SYDNEY, 1879; GOLD MEDAL, MELBOURNE, 1880.

# **GEO. M. HAMMER & CO.,** **SCHOOL & COLLEGE FURNISHERS,** **370 STRAND, LONDON, W.C.**

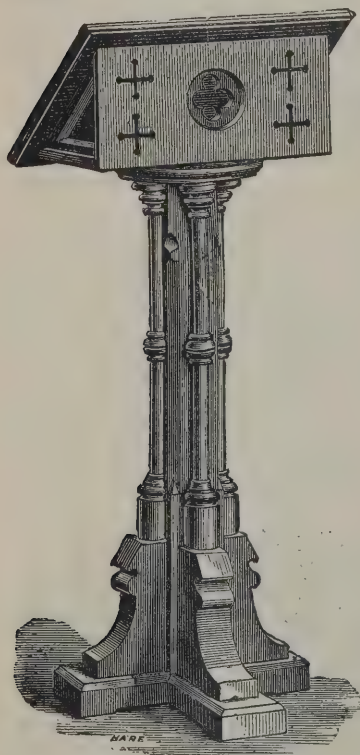


THE "OSBORNE" SEAT AND DESK.



THE "PHOENIX" DESK AND SEAT.

NEW EDITION OF CATALOGUE, WITH 160 ILLUSTRATIONS, FORWARDED POST FREE.



## **Church Furniture,**

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FITTINGS

MADE TO

ARCHITECTS' DESIGNS.

ESTIMATES ON APPLICATION.

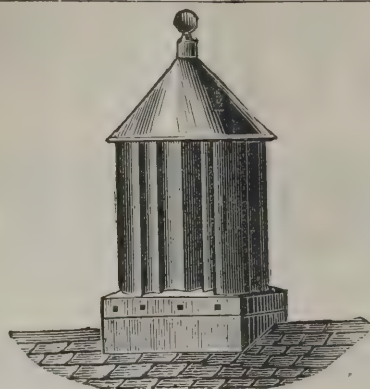


**GEO. M. HAMMER & CO.,**  
**370 STRAND, & CROWN WORKS, BERMONDSEY.**

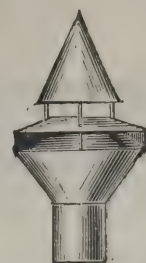




No. 2.  
SOIL PIPE VENTILATOR.



No. 1.  
EXTRACT VENTILATOR FOR SCHOOLS, &c.



No. 3.  
CHIMNEY COWL.

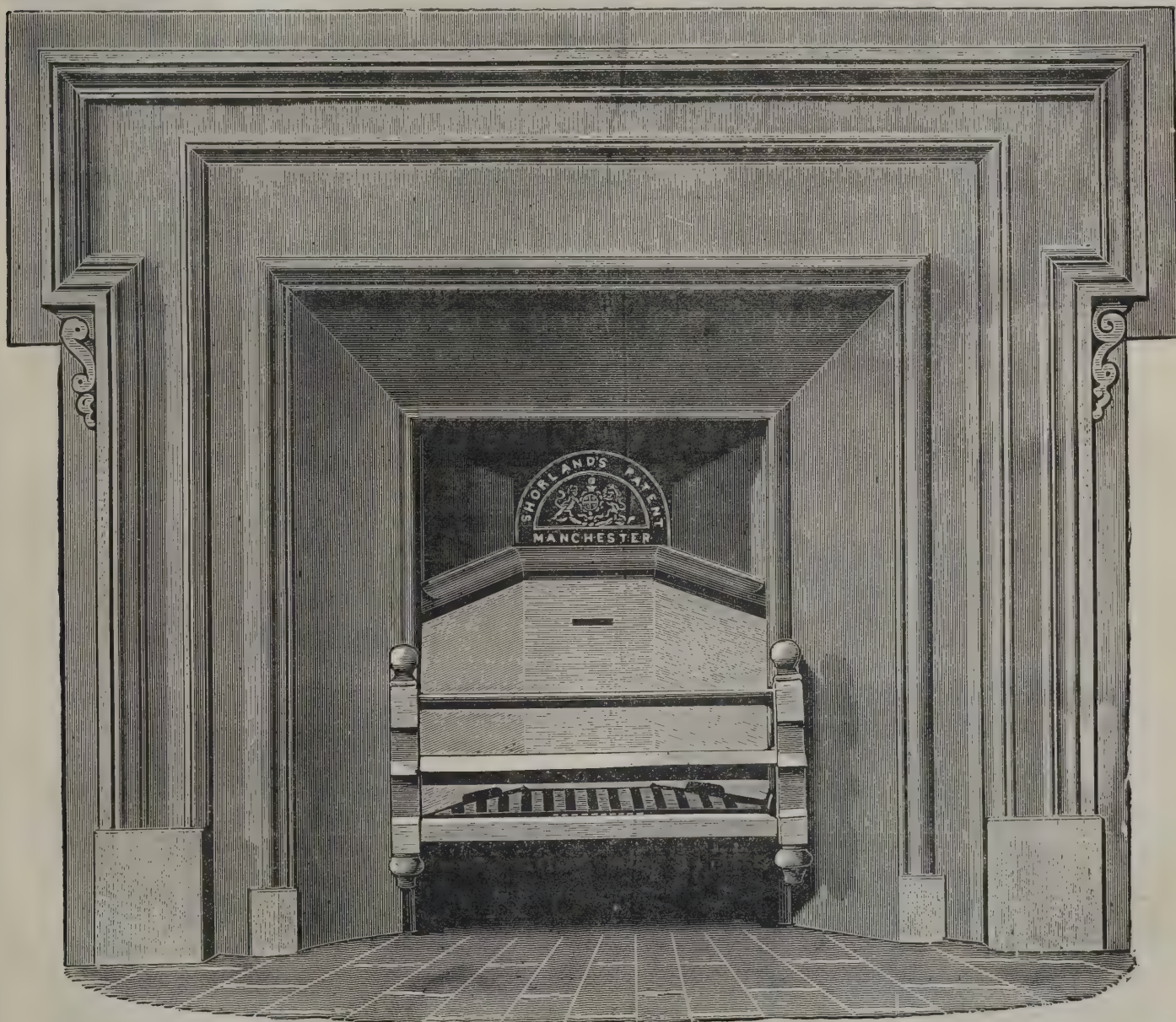
Extract Ventilators, for Public Buildings, Private Dwellings, Chimneys, W.C.s, &c.,  
MADE IN EVERY SIZE TO SUIT REQUIREMENTS.

## VERTICAL VENTILATING PIPES, BENDS, AND BRACKETS,

*In every Size and Design, for admitting Cold Air into Rooms without Draughts. Success guaranteed.*

In addition to the *many thousands* of the Patent Manchester Grates in use in the United Kingdom, Ireland and on the Continent, 80 have recently been fixed at the Salford Hospitals, Manchester; 70 at the County Asylum, Prestwich, near Manchester; and over 100 at the Oldham Workhouse, &c., &c.

Alexander Ross, Esq., Architect, of Inverness, writes on the 2nd of April, that he has the Manchester Grates in use at 109 Schools and Houses in Scotland.



The MANCHESTER GRATE can be applied to any design of grate front, and no grate as a heat giver is complete without it. The Manchester Grate warms and ventilates other rooms in addition to that in which it is fixed by that which is the waste heat of the ordinary grate. New book of Testimonials from all parts of the United Kingdom, alphabetically arranged, free on application.

**E. H. SHORLAND**, Sanitary, Warming & Ventilating Engineer,  
ST. GABRIEL'S WORKS, ERSKINE STREET, MANCHESTER.



# VENTILATION OPEN COMPETITION

AT THE VENTILATION OPEN COMPETITION  
JUST CONCLUDED AT BIRKENHEAD,

## BOYLE'S SYSTEM OF VENTILATION

WAS ADJUDGED THE BEST AND AWARDED THE  
**GOLD MEDAL**  
(HIGHEST AND ONLY PRIZE OFFERED).

### LATEST AWARDS:—

FIRST PRIZE (SILVER MEDAL),  
Mining Institute, Cornwall, September 1883.

FIRST PRIZE MEDAL,  
Cork International Exhibition, Cork, September  
1883.

HIGHEST and ONLY PRIZE  
Awarded to Exhaust Ventilators, Hygienic Exhibi-  
tion, London, June 1883.

FIRST PRIZE (SILVER MEDAL),  
North-East Coast Exhibition, Tynemouth, October  
1882.

GOLD MEDAL (HIGHEST PRIZE),  
International Exhibition of Means and Appliances  
for the Protection and Preservation of Human  
Life, London, July 1882.

£50 PRIZE (ONLY PRIZE OFFERED),  
International Ventilation Competition, London,  
May 1882.

SILVER MEDAL (HIGHEST PRIZE),  
Eastbourne Sanitary Exhibition, August 1881.

FIRST PRIZE (only one awarded to Roof Ven-  
tilators), International Medical and Sanitary  
Exhibition, London, July and August 1881.

**ROBERT BOYLE & SON,**  
64 Holborn Viaduct, London, and  
110 Bothwell Street, Glasgow.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, JULY 5, 1884.

### COMPETITIONS OPEN.

**RUGELEY.**—July 19.—Designs are required for Additions and Alterations at Grammar School. Mr. Robert Landor, Clerk to the Governors, Rugeley.

**NORTH SHIELDS.**—Aug. 18.—Plans are required for Alterations and Additions to the Workhouse. Mr. Christopher Scott, Guardians' Hall, North Shields.

### CONTRACTS OPEN.

**ASHFORD.**—July 16.—For Rebuilding No. 77 High Street. Mr. W. R. King, Architect, 22 Bank Street, Ashford.

**BARNET.**—For Additions to Mansion. Mr. J. Lish, Architect, Scottish Street, West Grainger Street, Newcastle-on-Tyne.

**BRADFORD.**—July 10.—For Building Warehouse. Mr. Herbert Isitt, Architect, Queen Anne Chambers, Bradford.

**BRADFORD.**—July 15.—For Extension of Infirmary. Messrs. Milnes & France, Architects, Bradford.

**BRIDGEND.**—July 15.—For Additions to Goods Shed. Mr. F. G. Saunders, Secretary, Paddington Station.

**BRIGHTON.**—July 10.—For Building Police Station. Mr. Philip C. Lockwood, C.E., Town Hall, Brighton.

**BROMSGROVE.**—July 8.—For Building Infirmary at the Workhouse. Mr. C. A. Edge, Architect, 21 Bennett's Hill, Birmingham.

**CLYDOCH VALE.**—July 9.—For Building Forty Workmen's Cottages. Messrs. Davies & Phillips, Architects, Pontypridd.

**CORK.**—July 7.—For Building Church for Lunatic Asylum. Mr. W. H. Hill, Architect, 15 Marlborough Street, Cork.

**DODDINGHURST.**—July 21.—For Additions to All Saints' Church. Rev. F. Stewart, Rectory, Doddington, near Brentwood, Essex.

**EDGORTH.**—July 10.—For Building Five Houses. Mr. James Parkinson, Station Road, Turton.

**GOREBRIDGE.**—July 7.—For Building Stobhill Church. Messrs. Hardy & Wight, Architects, 7 St. Andrew's Square, Edinburgh.

**HALIFAX.**—July 5.—For Building Residence, Stabling, Coachhouse, &c. Messrs. Horsfall & Williams, Architects, Post-Office Buildings, Halifax.

**HAVERFORDWEST.**—July 9.—For Restoration of North Aisle and North Clerestory of St. Mary's Church. Mr. Ewan Christian, Architect, 8A Whitehall Place.

**HOLBEACH.**—For Building School for Seventy-two Children. Mr. Joseph Sawyer, Architect, Holbeach.

**HUDDERSFIELD.**—July 7.—For Additions to Wesleyan Chapel School. Mr. T. L. Patchett, Architect, George Street Chambers, Halifax.

**KENSINGTON.**—For Building School. Mr. Hugh M'Lachlan, Architect, 45 Fenchurch Street, E.C.

**LANGLEY PARK.**—July 9.—For Enlargement of Schools. Mr. J. Henry, Architect, 11 North Bailey, Durham.

**LEEDS.**—July 11.—For Building Weaving Shed. Mr. J. M. Fawcett, Architect, 73 Albion Street, Leeds.

**LEITH.**—July 7.—For Enlargement of Victoria School, Newhaven. Mr. G. Craig, Architect, 85 Constitution Street, Newhaven.

**LLANDAROG.**—July 8.—For Building Vicarage. Mr. D. Jenkins, Architect, Gorlas, Llandeibie, R.S.O.

**LUDLOW.**—For Additions, &c., to Burway House. Mr. John Cotton, Architect, 37 Waterloo Street, Birmingham.

**MAIDSTONE.**—July 24.—For Additions to Ophthalmic Hospital. Mr. E. W. Stephens, Architect, West Borough Chambers, Maidstone.

**MILLOM.**—July 5.—For Building Three Shops and large Hall. Mr. T. B. Lillywhite, Architect, Market Square, Milloim.

**MONKSTOWN.**—July 7.—For Building Semi-detached Villas. Mr. Robert Walker, Architect, 7 South Mall, Cork.

**NORMANTON.**—July 16.—For Building Chapel. Mr. W. Hanstock, Architect, Branch Road, Batley.

**NEW BASFORD.**—For Pulling Down and Rebuilding Raven Inn. Mr. N. Walker, Architect, Newcastle Chambers, Angel Row, Nottingham.

**PETERBOROUGH.**—July 14.—For Building School and Class-room. Mr. H. M. Townsend, Architect, The Precincts, Peterborough.

**PETERBOROUGH.**—July 19.—For Building Cottages, &c. Mr. H. M. Townsend, Architect, The Precincts, Peterborough.

**PONTNEWYND.**—July 9.—For Building Baptist Chapel, Vestries, &c. Mr. George Morgan, Architect, 24 King Street, Carmarthen.

**POPLAR.**—July 18.—For Additions to Warehouse. Mr. G. Morris, Architect, 6 Oriental Street, East India Road, Poplar.

**SAMTHORPE.**—July 10.—For Building Cemetery Chapel, Mortuary, Lodge, Entrance Gates, and Palisading. Mr. Robert Clamp, 5 Land of Green Ginger, Hull.

**SHERNESS.**—July 9.—For Additions to Britannia Hotel. Messrs. Jeffrey & Skiller, Architects, 5 Havelock Road, Hastings.

**STAFFORD.**—For Building School at the East Gate. Mr. R. Griffiths, Architect, Greengate Street, Stafford.

**STRETTFORD.**—July 14.—For Building Cemetery Chapel and Lodge. Messrs. Bellamy & Hardy, Architects, Lincoln.

**SWAFFHAM.**—July 12.—For Building Stable, Bullock Boxes, Waggon Lodge, &c. Mr. W. G. Winearls, Solicitor, Swaffham.

**THORNTON-IN-CRAVEN.**—July 17.—For Building Residence. Messrs. Paley & Austin, Architects, Lancaster.

**TIPTON.**—July 10.—For Alterations to School. Mr. E. Pincher, Architect, High Street, West Bromwich.

**WORKINGTON.**—July 22.—For Building Board School, Boundary Wall, Dwelling House, &c. Mr. G. D. Oliver, Architect, 44 Pow Street, Workington.

**WREXHAM.**—July 12.—For Building Chapel at Moss. Mr. A. C. Baugh, Architect, Wrexham.

### TENDERS.

#### ABERDEEN.

For Three Houses in Stanley Street, Aberdeen. Messrs. ELLIS & WILSON, Architects. Quantities by the Architects.

Beattie, mason.

Smith, carpenter and joiner.

Maitland, slater.

Simpson & Rae, plasterer.

Matthews, plumber and gasfitter.

Garvie & Sons, painter and glazier.

#### ARDSLEY.

For Erection of Shed Mill, East Ardsley, near Wakefield. Mr. PAGE SPENCER, Architect, Batley Carr. Quantities by the Architect.

Accepted Tenders.

Kitson, Batley Carr, mason.

Land & Nettleton, Ossett, joiner.

Hepworth & Spurr, Ossett, plumber and glazier.

Lodge, Batley Carr, painter.

Howden, Wakefield, ironfounder.

Oates & Son, Dewsbury, plasterer.

Hargreaves, Dewsbury, slater.

#### BARLASTON.

For Additions and New Stabling, &c., at Barlaston, Staffs., for Mr. Michael Huntback. Messrs. R. SCRIVENER & SONS, Architects, Hanley.

Breeze, Stoke-on-Trent . . . . . £332 0 0

H. & R. Inskip, Longton . . . . . 328 0 0

Barlow, Stoke . . . . . 320 0 0

Bowden, Burslem . . . . . 311 0 0

Bennion, Longton . . . . . 301 9 8

Collis, Longton (accepted) . . . . . 280 0 0

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

TO ARCHITECTS.—THE BRICK of the FUTURE, that shall not get dingy or sooty like other Bricks, but, being of a **Semi-Vitreous** nature, will maintain a clean and washable surface.

## FACING BRICKS AND BRICK ORNAMENT

## TRUE TERRA-COTTA,

AS ALSO ARCHITECTURAL WORK,

## IN WHITE AND WARM-TINTED BUFF.

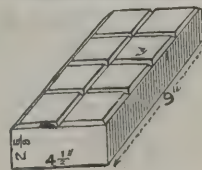
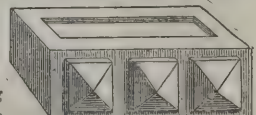
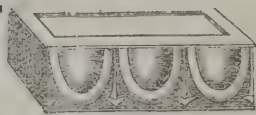
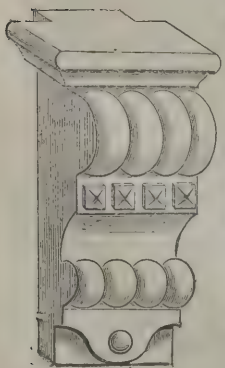
Made from the Finest Terra-cotta and Stoneware Clays, of a warm and pleasing appearance, of beautiful and superior quality and finish, non-absorbent, acid, fire, and alkali proof, will resist the most severe frosts, and when tested were found to withstand a pressure of 445 tons to the square foot. They have been used in the most exposed parts on the North and South Coasts, and being true Terra-cotta, are warranted imperishable.

Pattern Sheets and Price Lists of superior Glazed Stoneware Sanitary Pipes, and Fire Clay Goods, Chimney Tops, &c., on application.

Sole Manufacturers—CANDY & CO., Limited, GREAT WESTERN POTTERIES, NEWTON ABBOT, AND 11 QUEEN VICTORIA STREET, LONDON, E.C.

Who are also Sole Makers of the celebrated "Granite Vitrified" Paving Bricks for Yards, Stables, and Footpaths, and "Granite Vitrified" Damp-proof Building Bricks, as used by H.M. Government for dock construction, &c.

Samples free to Architects and Engineers.





## BIRKENHEAD.

For Building Sessions Court, &c., Chester Street, Birkenhead. Messrs. THOMAS D. BARRY & SON, Architects, Liverpool. Quantities by Mr. George Paton, Salford, Manchester.	
S. & W. Pattinson, Ruskington, Sleaford	£31,837 0 0
Thornton & Sons, Liverpool	30,992 0 0
Miller, Liverpool	30,932 0 0
Foorde, Birkenhead	30,502 16 5
Bull, Sons & Co., London	30,033 0 0
Urmsion, Liverpool	29,782 0 0
Brown & Backhouse, Liverpool	29,693 0 0
Yates, Liverpool	29,467 0 0
Winnard, Wigan	29,360 0 0
Webster, Bootle	29,331 0 0
Gabbutt, Liverpool	29,228 0 0
Leslie, Bootle	29,217 0 0
BLEAKLEY, Birkenhead (accepted)	28,890 0 0

## BOURNEMOUTH.

For Offices, &c., for Mr. W. Saunders, Bournemouth. Mr. H. E. HAWKER, Architect, Bournemouth.	
Jenkins & Son	£200 0 0
Vine	185 0 0
McWilliam	164 0 0
JONES (accepted)	163 0 0
For Kitchen Offices, Herbert Convalescent Home. Mr. H. H. E. HAWKER, Architect.	
Pike	£250 0 0
Hoare Bros.	243 0 0
JONES (accepted)	225 0 0

## BRISTOL.

For Messrs. W. D. & H. O. Wills's New Tobacco Factory, Bristol. Mr. FRANK W. WILLS, Architect.	
Estimates 1 and 3.	
Lewis & Edbrooke	£21,076 0 0
Brook & Bruce	20,600 0 0
Lynde, London	20,399 0 0
Walters & Sons	19,939 0 0
Krauss	19,412 0 0
Hatherly	18,987 0 0
J. Wilkins	18,692 0 0
Humphreys	18,669 0 0
Wilkins & Son	18,300 0 0
Forse	18,134 0 0
Eastbrook	18,120 0 0
Stephens & Bastow	18,000 0 0
Cowlin & Sons	17,900 0 0
Church	17,467 0 0
Davis	17,450 0 0
Howell & Son	17,450 0 0
Crocker	17,195 0 0
BEVAN (accepted)	15,710 0 0
Estimate 2.	
Lyseght	13,194 0 0
Krauss	12,245 0 0
Homan & Rodgers	11,933 0 0
Howell & Son	11,296 0 0
Measures Bros.	11,080 0 0
Dawnay	10,995 0 0
Lindsay	10,588 0 0
Stephens & Bastow	10,500 0 0
SAMPSON (accepted)	9,997 0 0

## CARDIFF.

For Building Bible Christian Schoolrooms, Classrooms, &c., Cardiff. Messrs. W. G. HABERSHON & FAWCENNER, Architects, London, Cardiff, and Newport. Quantities by the Architects.	
Pincombe & Chant	£1,261 4 0
Jones	1,253 0 0
Davies	1,150 0 0
Gray	1,126 0 0
Howard	1,053 0 0
Thomas & James	1,056 0 0
Hallett	1,020 0 0
Shepton	998 0 0
Shepherd	992 0 0

## FORFAR.

For Extension of West Burgh School, Forfar Burgh.	
Accepted Tenders.	
McLean, mason	
Farquharson, joiner	
Langlands & Milne, plumber	
Keith, heating	
Moffat, slater	
Barclay, painter	
Masterton, plasterer	
	£1,121 9 0

## HANLEY.

For Building Two Villa Residences, Snow Hill, Hanley. Messrs. ROBERT SCRIVENER & SONS, Architects, Hanley. Quantities by the Architects.	
Ward, Hanley	£1,750 0 0
H. & R. Inskip, Longton	1,687 0 0
Godwin, Hanley	1,640 0 0
Gallimore, Newcastle	1,578 0 0
Bennion, Longton	1,529 0 0
Cornes, Hanley	1,500 0 0
Gibson, Tunstall	1,491 0 0
Barlow, Stoke	1,460 0 0
Bennett, Burslem	1,420 0 0
Proctor, Tunstall	1,400 0 0

## IBSTOCK.

For the Restoration of the Parish Church of Istock. Messrs. GODDARD & PAGET, M.R.I.B.A., Architects.	
Herbert	£3,457 0 0
Foster & Dicksee	3,224 0 0
Hextall	2,940 0 0
Barnett	2,735 0 0
Wileman	2,727 0 0
THRALL & PAYNE (accepted)*	2,658 0 0
* Except the Chancel Contract.	

## LLANDUDNO.

For Building Cottage Hospital, Llandudno. Mr. A. FOULKES, Architect, Mostyn Estate Offices. Quantities by the Architect.	
Tomkinson & Co., Liverpool	£3,850 0 0
Griffiths & Thomas, Bangor	3,587 11 6
W. W. Williams, Llandudno	3,553 12 0
Conway, Llandudno	3,481 11 6
Roberts, Llandudno	3,050 0 0
R. WILLIAMS (accepted provisionally)	2,927 0 0

## LEICESTER.

For Building the Church of St. John, at Knighton, in the County of Leicester. Messrs. GODDARD & PAGET, M.R.I.B.A., Architects.

Bricklayers.	
T. & H. Herbert	£5,354 0 0
Stimpson & Rolleston	4,310 0 0
Barnett	4,113 0 0
Hutchinson	3,997 0 0
Clarke & Garrett	3,945 0 0
Jewsbury	3,837 0 0
Foster & Dicksee	3,721 0 0
Elliott	3,495 0 0
Hewitt	3,311 0 0
Duxbury & Son	3,300 0 0
Bass	3,293 0 0

## Stonemasons.

Foster & Dicksee	3,122 0 0
Currey & Flavell	3,116 0 0
Stimpson & Rolleston	3,069 0 0
Collin & Crowson	2,947 0 0
Thrall & Payne	
Barnett	
Duxbury & Son	2,768 0 0
Elliott	
Jewsbury	
Hewitt	2,724 0 0
Bass	2,680 0 0

## Carpenters.

Stimpson & Rolleston	1,957 0 0
Barnett	1,791 0 0
Duxbury & Son	1,611 0 0
Elliott	1,420 0 0
Jewsbury	1,370 0 0
Bass	1,349 0 0
Foster & Dicksee	1,327 0 0
Bentley	1,305 0 0
Hewitt	1,226 0 0

## Plumbers.

Underwood	182 0 0
Hewitt	165 0 0
Hudston	157 0 0
Adams	156 0 0
Matts & Biggs	153 0 0
Whitmore	149 0 0
Quarmby	143 0 0
Fizzard	143 0 0

Mr. Hewitt's whole tender of £7,426 is accepted.

For Building the Church of St. Barnabas, at Humberstone, in the County of Leicester. Messrs. GODDARD & PAGET, M.R.I.B.A., Architects, Leicester.

Bricklayers.	
Stimpson & Rolleston	£2,466 0 0
Bentley	2,414 0 0
Jewsbury	2,269 0 0
Bass	2,260 0 0
Foster & Dicksee	2,251 0 0
Elliott	2,212 0 0
Hutchinson	2,198 0 0
Barnett	2,174 0 0
Clarke & Garrett	2,157 0 0
Hewitt	2,126 0 0

## Stonemasons.

Currey & Flavell	1,904 0 0
Collin & Crowson	1,781 0 0
Foster & Dicksee	1,656 0 0
Hewitt	1,630 0 0
Stimpson & Rolleston	1,600 0 0
Bass	1,550 0 0
Bentley	
Barnett	
Clarke & Garrett	
Elliott	1,546 0 0
Jewsbury	
Thrall & Payne	

## Carpenters.

Clarke & Garrett	2,054 0 0
Barnett	2,053 0 0
Stimpson & Rolleston	1,979 0 0
Bentley	1,969 0 0
Foster & Dicksee	1,954 0 0
Jewsbury	1,858 0 0
Bass	1,819 0 0
Elliott	1,819 0 0
Hewitt	1,745 0 0

## Plumbers.

Foster & Dicksee	321 0 0
Hewitt	282 0 0
Hill	279 0 0
Underwood	277 0 0
Hudston	265 0 0
Fizzard	249 0 0
Adams	247 0 0
Matts & Biggs	239 0 0
Quarmby	230 0 0
Whitmore	222 0 0
Smith	190 0 0

Mr. Hewitt's Tender for bricklayer's, mason's, and carpenter and joiner's work is accepted.

For Erecting the Robert Walker Memorial Hall, situated in Melbourne Road, Leicester. Messrs. GODDARD & PAGET, M.R.I.B.A., Architects.

Tyres	£2,618 0 0
Bland & Son	2,497 0 0
Clarke & Garrett	2,481 0 0
Hutchinson	2,420 0 0
Hewitt	2,418 0 0
Barnett	2,418 0 0
Herbert	2,413 0 0
Bass	2,340 0 0
Elliott	2,323 0 0
Eagle	2,323 0 0
Jewsbury	2,273 0 0
Major	2,272 0 0
Stimpson	2,248 0 0
BENTLEY (accepted)	2,237 0 0

## LONDON.

For Building Board School, Kilburn Lane. Mr. E. R. ROBSON, Architect.

Perry & Co.	£18,990 0 0
Scrivenor & Co.	18,787 0 0
Downs	18,317 0 0
Lathey Bros.	18,295 0 0
Patman & Fotheringham	18,263 0 0
Bangs & Co.	18,200 0 0
Kirk & Randall	18,155 0 0
Shurmur	18,023 0 0
Oldrey	18,000 0 0
Hart	17,885 0 0
Wall	17,832 0 0
Jerrard	17,749 0 0
Priestley & Gurney	17,693 0 0
Grover	17,539 0 0
Wall Bros.	17,397 0 0

For Building Board School, Priory Grove. Mr. E. R. ROBSON, Architect.

Goodman	£13,333 0 0
Shurmur	13,221 0 0
Lathey Bros.	12,928 0 0
Hart	12,873 0 0
Priestley & Gurney	12,816 0 0
Perry & Co.	12,808 0 0
Scrivenor & Co.	12,764 0 0
Turtle & Appleton	12,763 10 0
Wall Bros.	12,723 0 0
Jackson & Todd	12,715 0 0
Patman & Fotheringham	12,643 0 0
Oldrey	12,600 0 0
Grover	12,490 0 0
Bangs & Co.	12,358 0 0
Kirk & Randall	12,328 0 0
Shepherd	12,326 0 0
Hobson	12,274 0 0
Stimpson & Co.	12,240 0 0
Wall	12,195 0 0
Hunt	12,141 0 0
Downs	12,090 0 0
Jerrard	12,089 0 0
Holloway	12,040 0 0
Tongue	11,675 0 0

For Erecting a Detached Villa Residence in Glenlue Road, Westcombe Park, Blackheath, S.E. Mr. HENRY ROBERTS, Architect and Surveyor, 113 Lewisham Road, S.E.

H. & F. THOMAS (accepted).

For the Erection of House and Shop No. 125, and private House No. 124 Evelyn Street, Deptford, S.E., for Mr. Geo. Skudder. Mr. HENRY ROBERTS, Architect and Surveyor, 113 Lewisham Road, S.E.

BLAKER & HAYNES, Deptford (accepted).

For Erecting Six Cottages, and Workshop in rear, situate in Grove Street, Deptford, S.E., for Mr. Frank Barnes. Mr. HENRY ROBERTS, Architect and Surveyor.

Cottages.	
HUBBLE & TROTT, Deptford (accepted)	£1,195 0 0
Workshop.	
HUBBLE & TROTT, Deptford (accepted)	87 0 0
Except bricks.	

For Alterations to the Globe Public-house, Evelyn Street Deptford, S.E., for Mr. G. Chapman. Mr. HENRY ROBERTS, Architect and Surveyor.

MEAGER (accepted).

Peewtering, &c.

RUSE (accepted).

For Alterations at the Windsor Castle Public-house, Victoria Station, S.W., for Mr. S. Raven. Mr. H. I. NEWTON, Architect, 17 Queen Anne's Gate, S.W.

Shurmur	£1,170 0 0
Cook	1,047 0 0
Godden	975 0 0
Lumble	887 0 0
Royal	869 0 0
STEEL BROS. (accepted)	849 0 0

Peewters.	
Warne	51 10 0
Hellings	42 12 6
Heath (accepted)	41 0 0

Gasfittings.	
WINN (accepted)	180 0 0

For Peewters' Work at the White Bear Public-house, Kennington, for Mr. Bannell. Mr. H. I. NEWTON, Architect, 17 Queen Anne's Gate, S.W.

MATTHEWS (accepted)

For Alterations to the Bodega Company's Premises, High Street, Borough, S.E. Mr. W. MACIE LEIR SEAMAN, Architect and Surveyor, No. 3 Chancery Lane, London, W.C., and West Kensington, W. Quantities by the Architect.

Structural Alterations, Counters, and Mahogany Work and Fittings.

Drew & Cadman	£2759 0 0
Patman & Fotheringham	650 0 0
Beale	598 0 0
HEWLITT (accepted)	520 0 0
Jackson & Todd	469 0 0
HEWLITT (accepted)	475 0 0
Jackson & Todd	462 0 0

Peewters' Work.

HEATH (accepted)

For Painting, Whitewashing, &c., at the St. Marylebone Infirmary, at Notting Hill, for the Guardians of the Poor of the Parish of St. Marylebone. Messrs. H. SAXON SNELL & SON, Architects, 22 Southampton Buildings.

Smith & Saunders	£190 0 0
Jolliffe	186 0 0
Wall Bros.	183 0 0
Derby	163 0 0
McCarthy	160 0 0
M. & M. Fleming	160 0 0
Sheerman & Son	160 0 0
VIGOR & Co. (accepted)	153 10 0



## LONDON—continued.

For Enlargement of Board School, Union Street, Woolwich. Mr. E. R. ROBSON, Architect.  
Stimpson & Co. (Tender on Schedule) . . . £951 0 0

## PONTYPOOL.

For Building New Congregational Chapel, Griffiths Town, Pontypool. Messrs. W. G. HABERSHON & FAWCKNER, Architects. Quantities not supplied.  
Moulton & Browncombe . . . £1,119 0 0  
Blackburn . . . 995 0 0  
Parfitt . . . 905 0 0  
Burgoyne . . . 845 0 0  
Poulton . . . 810 7 6  
Wilson . . . 801 10 0

## PURTON.

For Extensive Alterations to Dwelling-house at Purton, for Mr. James Sadler. Mr. ORLANDO BAKER, Architect, New Swindon.  
Phillips, Swindon . . . £585 10 0  
Barrett, Swindon . . . 563 15 0  
Wiltshire, Swindon . . . 535 0 0  
Taylor, Gloucestershire . . . 523 16 0  
Wallis, Wiltshire . . . 506 0 0  
Webb, Swindon . . . 473 0 0

## SWINDON.

For Extension of Catholic Schools, Regent Street, Swindon. Mr. W. H. READ, Architect, Swindon.  
BARRETT, Swindon (accepted).  
For Building Girls' School, Swindon, Wilts, for Swindon School Board. Mr. BRIGHTWEN BINYON, Architect, Ipswich. Quantities supplied.  
Wiltshire, Swindon . . . £2,075 0 0  
Phillips, Swindon . . . 2,050 0 0  
Barrett, Swindon . . . 2,028 0 0  
Jones, Gloucester . . . 1,880 0 0

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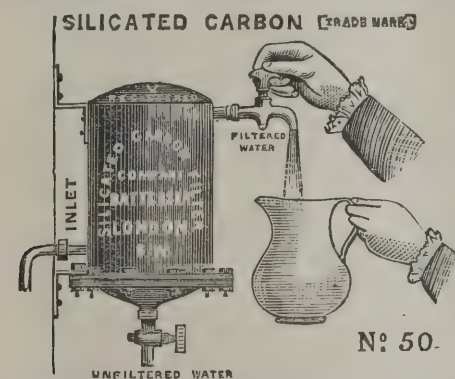
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For Rebuilding Premises in High Street, Sheerness-on-Sea,  
for Mr. D. Prosser. Messrs. P. P. PERRY & W. MACIE  
L. SEAMAN, Architects, 3 Chancery Lane, London,  
W.C. Quantities by Mr. W. Macie L. Seaman, 3 Chan-  
cery Lane, W.C., and West Kensington, W.

## If Executed with Ham Hill Stone Dressings.

Steer, Norwood	£2,886 17 7
Amos & Foad, Whitstable-on-Sea	2,750 0 0
Tinson, Kensington, W.	2,643 0 0
Stimson & Co., Brompton, S.W.	2,628 0 0
Paramour & Sons, Margate	2,530 0 0
Martin, Ramsgate	2,475 0 0
Seager, Sittingbourne	2,465 0 0
WHITE, London*	2,251 3 9

## If Bath Stone Dressings.

Steer	2,865 0 11
Amos & Foad	2,650 0 0
Stimson & Co.	2,598 0 0
Tinson	2,567 0 0
Paramour & Sons	2,466 0 0
Martin	2,437 0 0
Seager	2,424 0 0
WHITE*	2,201 3 9

## If Ham Hill Dressings and omitting Tower.

Steer	2,726 14 3
Amos & Foad	2,605 0 0
Stimson & Co.	2,480 0 0
Tinson	2,455 0 0
Paramour & Sons	2,398 0 0
Seager	2,360 0 0
Martin	2,355 0 0
WHITE*	2,000 0 0

\* Accepted.

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For Alterations and Additions to Coleyhurst, Bath Road,  
Reading, for Mr. Thos. Rogers. Mr. W. RAVENSCROFT,  
Architect, Reading. Quantities by Messrs. Cooper &  
Sons, Reading and Maidenhead.  
WHEELER BROS. (accepted) . . . £1,784 5 0

## TOWCESTER.

For Proposed Bridge at Bozenham Mill, Towcester. Mr.  
E. LAW, Surveyor.  
HEATH (accepted) . . . £228 10 0

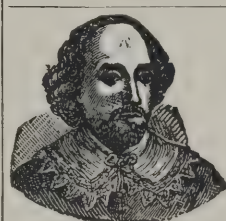
## WATFORD.

For the Erection of Malting and Cellars for Messrs. Ben-  
skin & Co. Mr. ARTHUR KINDER, Architect, 11 Queen  
Victoria Street. Quantities by Mr. Howard, Martin's  
Lane, Cannon Street.  
Andrews & Son . . . £5,998 0 0  
Greenwood . . . 4,899 0 0  
Neal . . . 4,857 0 0  
Turner . . . 4,694 0 0  
Pratt . . . 4,253 0 0  
WATERMAN (accepted) . . . 4,217 0 0  
Harley . . . 3,930 0 0

## WEOBLEY.

For Alterations and Additions, Weobley Police Station.  
Mr. WM. CHELSEA, Architect, County Surveyor,  
Hereford.  
Sandford, Letton . . . £1,485 0 0  
Pearson & Son, Ross . . . 1,455 0 0  
Morgan, Kingston . . . 1,278 0 0  
Pritchard, Hereford . . . 1,249 17 0  
Page & Son, Leominster . . . 1,235 10 0  
Daniels, Hereford . . . 1,174 0 0  
Gardiner & Co., Hereford . . . 1,150 0 0  
HUCKSON & WARWICK, Hereford (accepted) 1,085 10 0

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The novelty, superiority, and advantage of this patent  
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The same can be attached to any design of a Register or  
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"Sir,—I have much pleasure in testifying to the  
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"Yours, &c.

"JAMES WEIR, F.R.I.B.A.

"To Mr. Grundy."

"Baptist Chapel, Clapham Common, London. Richard  
Webb, Pastor, 10 Grafton Square.

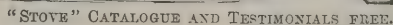
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"DEAR MR. GRUNDY,—I have pleasure in testifying to the  
excellency and efficiency of your patent Fire-Grate. It is  
the most charming invention for heating a large room I  
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This article is manufactured from specially prepared Asbestos fibre, and by its use any building can be rendered comparatively fireproof at a very small cost. This material should be used as a substitute for brown paper under the carpet, and it can be taken up and relaid as often as required; it may be laid between the flooring boards, on the ceiling before plastering, and on the walls. Doors of pine or other wood should be so constructed as to have a sheet of the felt in the centre, so that either side being burned the other remains intact. In houses so protected fires would be localised to the rooms in which they originate. Asbestos felt, being a non-conductor of heat, is superior to any other sheathing, and used under slates has no equal. It yields no dust, lies quite flat, is soft to the tread, and its low cost places it within the reach of everybody. Made in rolls of 36 inches wide.

IN ROLLS OF 36 INCHES WIDE.

**BELL'S ASBESTOS BOILER AND PIPE COVERING COMPOSITION** for coating every class of steam pipe and boiler. Non-combustible, and easily applied when steam is up; adheres to metals and preserves them from rust; prevents the unequal expansion and contraction of boilers exposed to weather; covers 50 per cent. more surface than any other coating, and is absolutely indestructible. It can be stripped off after many years' use, mixed up again with 20 per cent. of fresh, and applied again. The composition is supplied dry, and only requires to be mixed with water to the consistency required for use.

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A horizontal boiler, 17 ft. 6 in. long, 15 H.P., gave the following results:—

Temperature on Plates .. .. .	186 deg.
"    "    Covering .. .. .	94 "

One ton of coal was saved per week, and, although the fire was raked out every evening 20 lbs. of steam were in the boiler next morning.

The following testimonial refers to this covering:—

Offices of Wimbledon Local Board, Wimbledon, Nov. 28th, 1883.

Dear Sir,—It may interest you to know that we save exactly 40 per cent. in fuel through using your covering.—Yours truly,  
W. SANTO CRIMP, C.E., F.G.S.,

**BELL'S ASBESTOS PAINT**, for floors, stairs, and all interior woodwork, to prevent the spread of fire. This paint is especially useful in cotton mills, and in fact in all factories and buildings exposed to risk from fire. It is quite free from poisonous ingredients, and is both easily and cheaply applied. Bell's Asbestos Paint has, on several occasions, done great service in preventing the loss of life and property. The great fire in Buchanan Street, Glasgow, in November last, produced the following testimony to the value of this material:—

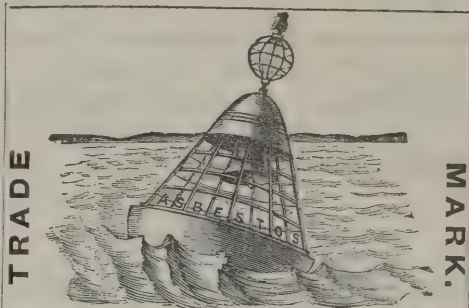
Offices of the *Glasgow Herald*, the *Weekly Herald*, and the *Evening Times*.

Mr. John Bell. Glasgow, Nov. 14th, 1883.

Mr. John Bell, Glasgow, Nov. 14th, 1883.  
Sir.—As one of the means that helped to save our buildings extending from Buchanan Street to the West, from the recent great fire, I think it fair to say that your Asbestos Paint, which was applied to the outside hoist, was the only one that was not consumed, and a valuable proof that it materially aided in resisting the flames from the immediately adjoining tenement where the fire was rapidly destroying it and threatening us in the most serious form. I placed a piece of wood, with your paint put on more correctly than in our case, into one of our furnaces, with the result that it was brought out without a fibre of the wood being touched, while similar pieces of wood, thrice coated with Irish Lime, at once became a flame, and were truly

(Signed) ALAN BELL, M.R.S.

**BELL'S ASBESTOS SASH-LINE CORD** is unaffected by heat and damp, and renders unnecessary the use of metallic wire and chains. Ropes made in the same form have great tensile strength, and being indestructible by fire are of incalculable value for fire escapes.



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The goods of this house are of the highest quality only, and no attempt is made to compete with other Manufacturers by the supply of inferior materials at low prices. All orders must be sent direct to the undermentioned depôts, and not through agents or factors.

**BELL'S ASBESTOS BOILER PRESERVATIVE.**—This useful

mixture, by absorbing the free oxygen that is in the water, entirely checks pitting and corrosion. It also disintegrates incrustation so immediately as to prevent its adhering to the plates. Not only is a great economy of fuel effected by keeping boilers clean, but the risk of having the plates burned is thereby obviated. It has been computed that 1-16th inch thick of incrustation causes a waste of 15 per cent. of coal;  $\frac{1}{8}$  inch thick, 60 per cent.; and  $\frac{1}{4}$  inch, 150 per cent. Thus the Preservative avoids the great risks which are inseparable from scaled plates, lengthens the life of a boiler, and covers its own cost a hundredfold by economy of fuel. It is entirely harmless, and has no injurious action on metals. It can be put into the feed tank or boiler, as may be most convenient. Sold in drums and casks bearing the trade mark, without which none is genuine.

**BELL'S PURE ASBESTOS CLOTH.** for protection against the spread

of fire. Iron curtains warp, and in the great emergency of fire will often be immovable. Asbestos cloth, being incorruptible, will remain strong and flexible for an indefinite period, and will stay the progress of a fire and the passage of smoke longer than any other known material. This cloth is also extensively used in Maignen's unequalled water filters, for which a gold medal and diploma of honour were awarded by the Special Commission appointed by Her Majesty's Government to receive the reports of the International Juries at the Fisheries Exhibition. By special arrangement with Mr. Maignen, his filters for houses, factories, and towns are supplied by this firm.

**BELL'S ASBESTOS BLOCK GAS FIRES.**—The Asbestos Block

Gas Fire is formed by placing inside the ordinary grate a hollow block (burner), composed of Asbestos, and perforated. An iron sole-plate, with a single gas burner, is fixed at the bottom of the block. After being lighted a short time, both the block and asbestos fuel throw out intense heat.

**BELL'S ASBESTOS FUEL** for gas fires. This genuine Asbestos Fuel is

composed of the finest hand-picked Asbestos, and its weight is about half that of any other Asbestos fuel.

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**BOARD**, for dry steam joints, made of the best Asbestos fibre, is well-known for its toughness and purity, and is absolutely free from the injurious ingredients frequently used to obtain an appearance of finish, regardless of the real utility of the material. Made in sheets measuring about 40 in. square, from 1-64th in. to 1 in. and  $\frac{1}{2}$  millimetre to 25 millimetres thick. Each sheet bears the Trade Mark.

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# The Architect.

## BETWEEN THE PAST AND THE FUTURE.



R. WILLIAM MORRIS, in a thoughtful dissertation which he read last week before the Society for the Protection of Ancient Buildings, lays down the proposition that in this present nineteenth century the artist stands unhappily between two worlds:—one that of the Middle Ages, so far understood if not yet quite clearly; and the other that of certain Ages to Come, not yet understood at all, or to be anticipated even with any serviceable kind of foreknowledge. He puts the case a little more strongly still—and at the same time a little more weakly—in calling upon us to “admit that we are living in a time of barbarism, betwixt two periods of order, the order of the past and the order of the future,” some thinking “that the end of that barbarism is drawing near, and others that it is far distant.”

The idea here indicated is one that may or may not seem to be quite true, according to the light in which it is regarded; but there can be little difference of opinion as to the contrast which the accomplished theorist provokes between the art workmanship of four or five hundred years ago, when looked at learnedly and (as the phrase used to be) “lovingly,” and that of a few hundred years to come, when contemplated with all the faith, hope, and charity of a poetic intellect, whose confidence in the development of the unknown, and perhaps the unknowable, is earnest and sincere.

But surely it need not be part of an attempt to form some impression of this most interesting contrast, that one should previously commit himself to the “admission” which Mr. MORRIS requires, that we are really living in a period of “barbarism.” May we ask his leave to substitute for this ugly word some phrase that shall rather suggest transition or the like, of a creditable, honourable, indeed brilliant kind? Mr. MORRIS, we have little doubt, will say, Certainly not. The barbarous character of this intervening time seems to be, in spite of all, of the essence of the doctrine he would teach. We have fallen from a high estate, and fallen far. Posterity is destined to rise again, and to rise, perhaps, to a higher level than the old; but there is to be no mistake about the fact that we are on low, even very low ground, for the present, and he would probably say that this is the reason why so many of us fail to see so clearly as he does the higher ground of the Mediæval time, and why all of us fail as yet, himself included, to discover, by any intelligible indication, that which in the prophetic days to come is to occupy the lofty table-land of “the order of the future.” Let us at once submit that this condition cannot be accepted by common sense. Every succeeding year's work must satisfy calm observers more and more that this doctrine of “barbarism” is but a rhetorical flourish, and happily there is no need for its serious acceptance as a preliminary to the discussion of Mr. MORRIS's very clever statement of a most important practical question.

This question may be briefly put in plain terms thus:—That the peculiar guild-action (such as we spoke of in another connection last week) of the later Middle Ages was the secret of the success of that period of art-history; that the loss of this vital force is to some extent the cause of the alleged modern incapacity; and that the “order of the future,” when it comes, as come it must, in the shape of some agency yet unknown, will be the basis of a new and true artistic world, to the credit of humanity and its great delight.

Mr. MORRIS sketches with a skilful and earnest hand the broad distinction between the typical slave-artisan or artist of ancient Greece and Rome and the typical guild-master-workman or craftsman of Mediæval Europe, who was not even servant, but free man, doing his work with his own hand at his own pleasure, and thereby earning an easy livelihood with leisure and self-respect. Without disparaging in the least degree the exquisite productions which were accomplished—he thinks under conditions of something like public contempt—in Classic times, he points with enthusiasm to the greater volume of equally excellent work—more excellent work

he would say, because of its all-pervading character—which was produced by independent individualism in his favourite period, of which the fourteenth century was the culmination. From that time to the days in which he himself has, as we are led to suppose, the misfortune to live, the spirit of art he considers to have pined and dwindled away; and this chiefly, if not entirely, by reason of the disastrous development of the antagonistic commercial spirit, with its callous dealers, brokers, traders, employers, its machinists, dividers of labour, managing men, and other vile mechanical persons, whose only business it is to promote the buying and selling of they care not what, in degraded markets they care not where, and the making of “profits” out of “goods”—terms that mean nothing, or at any rate nothing that can be identified with meritorious art; until at length, when England has become “the workshop of the world—often so called with much pride by her patriotic sons,” it would seem as if spinning jennies and the like were the real inhabitants of our tight little island, with “women and children” for their pale and dumb attendants, and the ghost of a craftsman here and there performing the “contemptible task” of an overlooker. No one need care to deny that there is a great deal of truth in this.

But, although there are no doubt many who, with Mr. MORRIS, will stoutly repudiate the qualifying doctrine that this Victorian Age of ours is nevertheless a most grand and glorious era, yet there are many others who are prepared with equal obstinacy, if not with equal ardour, to maintain as much, and to care little, indeed, what may become of the fourteenth century if it cannot take care of itself in consequence. Granted this is a period of mechanical organising, machine-working, listless copying, adulterating, scamping, chaffering, and commercial sophisticating in a thousand ways. But why jump to the conclusion that these conditions are the prime moving forces of the world in art, when such a supposition in any other matter would be so much at variance with the phenomena of human action? “God made man upright” is a dogma which lies at the very root of all the hopes of all good men; that “he hath sought out many inventions” we must confess; but take the good with the bad, the rough with the smooth, and no one who looks below the surface of the matter cares to doubt that the good and the smooth predominate in one way or another everywhere and in everything; and in art it would be idle to pretend to think that this is not the rule, and the only possible rule. Are all the Greek remains, to say nothing of the Roman, equally good art? The Mediæval remains, also, if looked at with ordinary common sense, is there not a large proportion of them that are of very inferior merit, while only a small proportion are of high excellence? So also in our own times, whatever may be the prejudicial effect of various modern conditions, is it not the plain, palpable, sober fact that there is a large amount of admirable art-work produced all over Europe every day—and a fair amount, indeed, of more than admirable work, which, when sanctified by time, will take its place in the collections and museums of the future with all honour? Why pick out the failures alone and ignore the successes, in order to make a show of “barbarism”?

Mr. MORRIS's argument, again, excellent as it is in its suggestiveness, seems to be based throughout upon a postulate which certainly requires consideration at the hands of scientific thinkers before it is so blindly accepted as a certain school of enthusiasts constantly demand. This may be called the doctrine of pure individualism. A work of art, to be worthy of the name, ought to be, upon this principle, the whole work of a single worker. This condition is supposed to elevate the production to the true rank of craftsmanship, and to separate it from the mass of inferior “goods” which is produced by an utter confusion of workers, and even perhaps by abhorrent machinery. It is as if there were three degrees of merit in the beautiful: that of nature, that of man, and that of mechanism—the first mystery, the second art, the third—but who, being pressed to attach to this in soberness a designation of derision, such as it is easy enough to choose from amongst the many phrases of flimsy rhetoric and foolish ecstasy, will venture so far?

At any rate, if we keep to the question of individualism, there is this at least to be said, that, if every craftsman of the fourteenth century were as jealous of his own merit as the admirers of the authenticity of his work in the nineteenth century are, the condition of the guilds, as regards personal conceit and priggishness, must have been intolerable; a state



of things of which we have no evidence in the records or the remains, even if we have not pretty good evidence of the very contrary. The fact seems to be that the worship of pure individualism in art, which we are accustomed to be called upon to regard as a first principle of simple intelligence, is but an incident peculiar to our own modern times, part of our system of commercial authenticity, and, even in its more intellectual aspect, nothing more than part of that development of "the Revival of Arts and Letters," "the Renaissance," which we are sometimes inclined to disparage and repudiate nowadays, but whose children we nevertheless still are, and cannot help it.

To take an illustration from architecture, the reader will perhaps acknowledge that this, when at its best, is an art of undeniable refinement, majesty, and glorious power. And yet this is the one art in which the artist cannot possibly do the work with his own hands. In his shrewd, paradoxical way, Sir EDMUND BECKETT seized upon this fact not long ago, when in a merry mood, and by an easy syllogism deduced from it the sarcastic conclusion that an architect is not an artist at all! What would Mr. MORRIS say? But suppose some one of our great architects, instead of trumpeting abroad his artistic individuality, were to disclaim it altogether on principle, saying, "Here is art, no matter whose; hundreds of workers have delighted in it; and their fit reward is this—let thousands of observers have a like delight; to ask their names is idle, to answer profane!" We are not afraid to think seriously that this was very much the spirit of "the order of the past."

Perhaps "the order of the future" is to be a state of things in which a work of the beautiful will be judged of by its own merits, and the name of the men, and of the machines, that made it, alike relegated to oblivion. Possibly, after all, our worship of names is but an easy way of cataloguing merits which we cannot recognise, and of appraising "goods" which we do not understand.

## STUDIOS IN ROME.—BARON VON LEMBACH'S.

[BY A CORRESPONDENT.]

AMONGST the remarkable studios of Rome, that of the Bavarian painter, F. VON LEMBACH, must certainly be enumerated. His fame as a portrait painter is European. His studio may be considered as a portrait gallery of some of the most notable personages of the time, some record being retained either in drawing or otherwise of the majority of the portraits he has taken. His studio, adjoining that of the celebrated private collection of the Prince BORGHESE and under the same roof, may be visited together with that assemblage of masterpieces, to which his works offer a not altogether unworthy pendant, exemplifying, as they do, so much of the influence of the older painters in modern forms.

His works consist entirely of portraits, all of them executed with manly grasp and vigour, whether his subjects be taken from the drawing-room or the senate. His mode of working is very interesting. Previously to painting he usually makes a preparatory study in coloured crayons, touched upon with distemper. This is done of a size more or less approximating to that of life, on a sheet of brown-grey cardboard of a certain quality or texture. Sometimes these preparatory studies are thinly painted in oil on the same material. Some of them are very striking, from their forcible drawing and generally expressive treatment. Of these, many are to be seen in his studio. It would seem as if the painter in the first instance strove to seize the distinctive character and broad effect of the face or figure to be painted, and then to bring into it the artistic qualities of richness of colour and pictorial values. His first studies are made with considerable rapidity and great mastership of handling. The eyes form a most prominent feature, and are usually seized upon as the prime indicator of the face. Some of his portraits glow with colour, reminding one of the master-painters in this respect—REMBRANDT, RUBENS, and the Venetian school. Others, again, are executed with high regard to the modelling, or rather to the expressive lines of the face, as of HOLBEIN. All are noticeable for some artistic quality, though they do not all make their appeal in the same direction.

To enter into a more special examination of these works

in passing round the studio, we are first struck with a fine portrait of STROSSMEIER, the Archbishop of Agram. It is thinly painted, gray in tone, and full of power and intelligence. Of WAGNER we have several portraits, all of them more or less characteristic. One of these represents the poet-musician seated, full-face view, smooth in texture and transparent in quality, reminding us of some of the finer examples of the Dutch school. There are two very spirited portraits of BISMARCK. One gives him seated with his hat on, which covers an eagle-like face in its piercing intensity of gaze, as if the eye had indeed the energy of life behind it. In the other he is represented standing bare-headed, the full modelling of the face coming out in strong relief. Both of the portraits reveal the energetic statesman, the inflexible will, with a stern and indomitable force of character. The portrait of Dr. DÖLLINGER is monumental in its fine and expressive treatment, and might very well find a place in a gallery of worthies of the time. In the portrait of the CROWN PRINCE of PRUSSIA we have a dignified and majestic half-length figure, rendered in rich, low-toned colours that bring the work of TINTORET to mind. A very charming picture, with some tender passages of colour, is a portrait of a German lady carrying a baby with a doll. This has much of the broad rendering that belongs to our English last century school of portraiture, reminding one of REYNOLDS in his richer moods. There are two portraits of GLADSTONE: one severe in modelling, thorough in drawing, thoughtful and earnest in expression, as though it bore the impress of the cares and harassment of statesmanship of many years. The other is more reflective than active in expression: it might be interpreted as representing the man rather than the statesman. The two pictures may thus be said to form companion portraits. Another characteristic likeness is that of the Prince TEANO of Sermoneta. With a face somewhat long and spare in feature, it expresses great nervous energy, an expression to which the strongly-drawn hand placed upon the breast contributes. That of the Prince BORGHESE is a fine, well-grasped portrait, the grey hair and beard being specially well rendered. The Marchesa LAVAGGI, represented in evening dress, the head turned over the shoulder, is large and serious in treatment, full toned in colour, but somewhat over-refined in drawing. Not less distinguished is the full-length likeness of the PRINCIPESSA DEL DRAGO, granddaughter of the Queen of SPAIN. In the portrait of the sister of the artist, an early painting, we have a work which obviously has been done under the direct influence of REMBRANDT, rich and brown, but deficient in the reposeful neutrals of his great prototype. Of Baron LIPHARDT we have several portraits, the painter evidently having been fascinated by a certain severity of line and seriousness of character which distinguish the face. They are mostly in profile; all excellent both in modelling and in colour. He is represented as wearing a black skull-cap, with much of the scholarlike aspect and thoughtfulness which is impressed upon the personalities of the English divines of the seventeenth century. A Hungarian lady is given in a dramatic attitude with one arm raised to her breast. This is at once dignified in pose and impressive in its powerful execution. Perhaps one of the sweetest and most sympathetic of Baron VON LEMBACH'S portraits of ladies is that of Madame ANTONINA DIEZ, the wife of the Uruguay Minister in Rome. A fillet is worn round the head, which is natural, sweet, and unaffected.

Amongst the drawings on card in pastel and distemper we have MOLTKE in profile, severe and lifelike in character; the Marchesa DEL GRILLO, daughter of Madame RISTORI, the well-known actress, a well-turned profile, excellent in likeness; and another charming profile, earnest and lively in expression, of the young Princess MASSIMO. There is also a happy drawing of the head of a girl of ten or eleven, with hair streaming on each side of the face against a blue sky background, which might have been from the hand of one of the early Umbrian masters.

In thus passing through the studio of this painter one cannot fail to be struck with the evidences of a high artistic power, which, nevertheless, is not equally distributed throughout his works. They lack the impress of a distinct personal character. One is continually reminded of some older type of greatness which they recall; always good and noble, but not absolutely the artist's own. He has *discovered* nothing. His work does not suggest any new point of view, any fresh mode of interpreting or regarding the facts of nature, qualities which



always distinguish that of the first masters. Again, there is a want of clearness and purity both of tone and tint in many of his pictures. There is a tendency to heaviness in some of them. In spite of their facility of treatment they lack spontaneity and freshness. One misses in them the wholesome frankness and sweetness of the English school of REYNOLDS and GAINSBOROUGH, and even of the lesser masters of the same or a later period; as in the works of Sir THOMAS LAWRENCE, for example. As has been said, the painter aims mainly at giving a decided character to his faces, and in this he generally succeeds. Whatever their shortcomings, however, there is no question as to their merits, nor to the fact that they may be studied with pleasure and profit.

### AN ARCHITECT'S SKETCH-BOOK.\*

A NEW volume of architectural sketches can suggest thoughts unlike those which arise on the appearance of the majority of books. It is sometimes difficult to speculate what kind of men and women are the writers who are described in the advertisements as "new authors," but it may be safely assumed that an architectural sketch-book has been produced by a young and most probably by a happy man. He may have returned from his first Continental trip after seeing everything with a delight which unhappily does not accompany subsequent visits. Seen on a summer's day, a town in Belgium or France cannot fail to be pleasing; but it appears enchanted ground when one comes to it in youth from a drawing-board in a back room in a dull English town. The power of representing things on paper assumes a new value on finding that it enables us to perpetuate our pleasure. The simplest sketch acquires some of the glamour of the place, and blacklead lines in a mysterious way recall not only colour but everything that gave life to the scene. We feel that we have discovered the treasure, and, oblivious of what has been done by men who were more clever than ourselves, we resolve to reveal the glories of the town or of the building to the untravelled. So the sketches are produced. After a time the value of them is diminished in the author's eyes, they seem hardly worth the expenditure of so much enthusiasm, and it would be difficult to persuade him to put his name to a second volume. Poems, histories, tragedies, novels, and treatises on the differential calculus may come from men of mature age, but not books of sketches of buildings.

We were not surprised to find a commonplace church tower in Mr. THORP's book, accompanied by a description which said that the sketch was made during a summer holiday, or that "the day when it was visited was gloriously fine, and the old grey tower, with its corbelled-out belfry stage, backed by the spreading branches of some ancient Scotch firs, their ruddy stems visible through the deep green foliage, stood out clear and distinct against a sky of the most intense blue." It is generally under those circumstances that architectural sketches are made. In another place we read that at Woodsome "an air of quiet and dignified repose seems to pervade the very atmosphere." The little slate spirelets in Bruges are said to have a charm that is beyond description, "and nothing can excel them for subtle effects of light and shade and wealth of artistic colour;" a fountain in a market-place recalls the "merry groups of children who resort hither, not merely to draw the daily supply of water, but also to splash one another with the sparkling and transparent liquid." An old timber house is said to be "helped considerably by the garden in the foreground, which at the time the sketch was made was a perfect blaze of colour." If the trees were omitted we could almost divine that the sketches were a summer's task by a man who has an artist's sensitiveness to whatever is beautiful in out-of-doors life. To appreciate a book of this kind properly one ought, perhaps, to have accompanied the author, and to have enjoyed the scenes as he did. Things of beauty in an architectural sense are not always equally joyful to all men, and some of the subscribers may feel compunctious visitings of conscience on remembering that, in days when there was no reverence for Queen Anne, they saw a few at least of the buildings drawn by Mr. THORP without thinking there was anything remarkable about them, unless it was their lawlessness.

The "Home" sketches are selected from Yorkshire buildings which are accessible from Leeds, and have been made in holiday leisure. There are accordingly associations about them which must have enhanced their value in the artist's eyes; but if judged simply as examples of architecture, it must be said that in general design and in details they are inferior to the foreign buildings which are represented in the volume. Calverly Old Hall (which is supposed to have been the scene of the events of the Elizabethan play "A Yorkshire Tragedy"), Woodsome Hall (with its terrace and balustrade), and Cawood Castle are the best of the secular buildings. There are details which have undoubted interest. One is the stone recess or "sideboard" in Harewood Castle, which resembles an Easter sepulchre, and must have been as grimly suggestive in a dining-hall as a mummy at an Egyptian feast. A second good bit is the window recess in Hawksworth Hall, in which the carved work is not superabundant in quantity. The oak staircase in Woodsome Hall shows newels and balusters which are in good proportion, and the newels are not excessively large. One does not wish to vilify native work, but all that can be said in favour of some of the subjects is that they were produced in the seventeenth or eighteenth century; to many people that will be sufficient to give them fascination.

The Belgian buildings are the work of a different class of men, and there are many which do not depend on local associations for their interest. A good many come from Bruges, that picturesque old city which has suffered a reverse of fortune, but somehow, amidst its quietness, impresses one with the feeling that it is to be prosperous again, as it deserves to be, if it were only on account of its patronage of the arts. Every man who has been there has his own special favourites, and two would hardly agree in making a selection. But Mr. THORP has done very well in what he has given. We have the beautiful baptistery of Notre Dame, which looks like the design of a metal-worker, the series of windows which are combined into one big window at the Mont de Piété, the Belfry of the Halles (very carefully drawn), and a great many details of work in brick, wood, metal and slate. Next come the extracts from Ghent, the city of which CHARLES V. said that he could put the whole of Paris within its walls. Whatever may have been the relation between the emperor's Gand, and the Paris of the sixteenth century, the modern Ghent, although one of the most scenic of cities, will not admit of a comparison with the French capital. The houses appear to have been intended for a wealthier race than their present possessors. Mr. THORP gives the Maison des Bateliers, in which the windows are better than the gable, an old house near the Hôtel de Ville, the house on the Marche du Vendredi which is said to have been occupied by the terrible Duke of ALBA. The last is now a second-hand clothes shop. A small sketch is given of the fine tower of St. Nicholas, the oldest church in Ghent. It was on this tower that PHILIP VAN ARTEVELDE, according to Sir HENRY TAYLOR, used to find occasional repose in the time of the war between the White Hoods and the Earl of FLANDERS, and some of the scenes in the dramatic romance of the poet are laid in this church. Some very good sketches of houses have been supplied by Ypres, as well as the tower of St. Martin's Church, erected in 1254, and which happily "remains in its original condition untouched by the hands of the restorer."

Mr. THORP's book should have an interest for bibliographers, if it were only on account of the pains he has taken to illustrate the house in Antwerp which belonged to CHRISTOPHE PLANTIN, the great printer, who was the rival of ALDUS in the sixteenth century. The family were proud of their printing office, and it existed for more than two centuries. The buildings date, according to Mr. THORP, mainly from the beginning of the sixteenth century, and the visitor is impressed by their repose on entering:—

The general effect of the court with its arcades sheltered from the glare of the sun, above which, framed in elaborate cartouche work, appear busts of the worthy owners, its mullioned windows glazed in leaded patterns, with here and there a quaint dormer rising above the roof line, is highly picturesque; the effect being, no doubt, considerably enhanced by the luxuriant growth of an ancient vine which festoons itself against the walls, the greenery contrasting admirably with the mellow deep red tones of the brick-work background.

The drawings of the Plantin Museum consist of a view in the court, a part of the staircase, a chimneypiece, and plates of details of the woodwork. The design of the work is of a high

\* "An Architect's Sketch-book at Home and Abroad." By William H. Thorp, A.R.I.B.A. Published by R. Jackson, Leeds, and B. T. Batsford, London.



character, and it is evident the owners were as careful in selecting their builders as their typefounders. It is the best of all the mansions represented by Mr. THORP. Some other sketches have been derived from Antwerp. Malines is represented by the picturesque Couvent des Carolites, of which the upper part is better than the lower; and Namur by a sketch of the interior of St. Loup, which is less finished than others in the book. Two views are given of Dinant, a town which of late years has become a centre of attraction to artists. Treves has gained importance in connection with the new views on the relation between Western architecture and Rome, but Mr. THORP's sketches are mainly of domestic buildings. It is a town which has yet to be thoroughly explored. There are some very good sketches from Berncastel and Cochem. The latter appears to be well worth a visit during holiday tours. A view is given, among other buildings, of the Schloss Elz, near Moselkern, and if the interior is as good as the exterior it deserves to be amply illustrated.

Mr. THORP's sketch-book appears at an opportune time, when the holiday programmes are being arranged. The author takes delight in picturesque architecture, and is quick in his recognition of the good points of a building. In his book there are many drawings which everyone must admire. The architects of the old buildings represented by Mr. THORP are forgotten; but there is no doubt that they were artists, and it would be strange if, from such a collection of their works, inspiration cannot be drawn without much difficulty.

### EXHIBITION OF SCOTTISH PORTRAITS.

**A**N exhibition of Scottish portraits was opened in the Royal Scottish Academy Galleries on Saturday last. Among the 570 canvases for which space has been found, a good many will be recognised as having appeared in recent loan exhibitions. The difficult task of hanging has been judiciously accomplished by Mr. Gourlay Steell, R.S.A., Curator of the National Gallery.

On entering the rooms, says the *Scotsman*, the visitor will find himself among a quaint and interesting company of royal, noble, and ecclesiastical personages, who in their day played a somewhat conspicuous part in Scottish affairs. Among the artists represented here are Jamesone, Janssen, More, Holbein, and Mytens; but a large proportion of the portraits, and some of these by no means the least noteworthy, are of unknown authorship. Such are the likenesses in one frame of James V. and Mary of Guise, a work which has been described by Miss Strickland, and is further known through engraving. This most desirable contribution has been obtained from the Marquis of Hartington, who also lends a full-length of James V. as a child, and two portraits of Arabella Stuart, one of which represents that ill-fated lady as a little girl holding a doll. James VI. appears on several canvasses, including a half-length by Janssen and a full-length ascribed to Jamesone, most of which agree tolerably well in their rendering of the sapient monarch's shrewd, if by no means distinguished, lineaments. Of James's consort, Anne of Denmark, there are two whole lengths, one credited to Jamesone, giving her a refined complexion, and an extraordinary redundancy of hoop; the other, by Mytens, less extravagant in costume, but not at all so refined in colour. Of Mary Stuart there are several likenesses, of which one by Zuccherro, and that belonging to Trinity College, Cambridge, though faded in colour, have considerable interest of expressions, while a cabinet head, attributed to More, suggests more than either of the Queen's traditional beauty. Fine examples of More are to be found in cabinet half-lengths of the Abbot of Newbattle and his wife; and to the same hand some will be inclined to attribute a masterly portrait of the second Earl of Arran, to which is appended the name of Zuccherro. Holbein's solid and searching realism is illustrated in heads of Margaret Tudor and James IV.; and a charming example of Van Somer presents itself in the softly-modelled and delicately-coloured face of a Countess of Ancrum. Of the numerous portraits assigned to Jamesone, one of the most undoubtedly genuine is probably the half-length of the first Marchioness of Argyll. A family group, showing the artist with his wife and child, is understood to be a copy. Other examples, while probably authentic, bear manifest traces of retouching; and there are some which will hardly be accepted by experts as the work of the "Scottish Vandyke."

Passing to the second room, one finds a considerable space occupied with specimens of Lely and De Medina. The former is seen, perhaps, to most advantage in a refined portrait of Archbishop Sharp and a vivacious half-length of David Leslie, commander of the Scots forces in the Civil War. There is no superfluity of refinement in his exuberant three-quarter length of the Duchess of Lauderdale, and still less in that of the Duke who gained unenviable notoriety as the persecutor of Scottish Presbyterianism. Of De Medina's work there are a portrait of the first Earl Stair, who was Secretary of State, under William III., when

the massacre of Glencoe was ordered, and a delicately-coloured half length of Frances, Countess of Buchan, granddaughter of the author of "Religio Medici." A spirited full-length of Sir James Pringle, in the costume of the Royal Archers, does credit to the art of D. Martin; while that of G. Hamilton makes a favourable impression in his rendering of the beautiful Elizabeth Gunning, wife of two and mother of four dukes, whose portrait by Reynolds will be remembered as a feature of last year's loan collection. A sumptuously costumed whole length of a Marchioness of Lothian displays the courtly elegance of Allan Ramsay, whose manner shows with more telling effect in his seated portrait of the second Duke of Argyll, in richly ermined scarlet robe. A half-length of Charles I., attributed to Vandyck, can only be accepted as that artist's work on the assumption that the distortion of the features is the result of clumsy repainting. Other examples of the great Fleming are the first Lord and Lady Belhaven in one frame, the second Duke of Hamilton, and those three views of the head of Charles I. which the king sent to Rome with a view to the execution of a bust, and afterwards presented to Lord Strafford. In a bust portrait by D. Patton of General Thomas Dalrymple, the suppressor of the Pentland rising wears a somewhat rough and unkempt look in his shaggy beard and long white hair. The same figure, with long hair, but without the beard, appears in capitol painted armour in a three-quarter length by C. Jansson. A curious design by Delacour represents Sir Stuart Thriepand in the act of being warned by a cherub as to how he should escape from Culloden; and there are two interesting portrait groups by D. Allan—one of the Mar family, of the middle of last century, in the grounds of Alloa House, the other of the Cathcarts, assembled about a tent on the field that witnessed the first cricket match ever played in Scotland.

On entering the great room, attention is at once arrested by the familiar hand of Raeburn, represented by such well-known masterpieces as the delightfully-posed and charmingly life-like Mrs. Bell; the vigorous Nathaniel Spens, drawing his bow in the costume of a Royal Archer; the dignified full-length of Lord Frederick Campbell, robed as Lord Clerk Register; the effectively-lighted portrait of Roland of Gask, the original of Scott's Pleydell; the stately figure of Viscount Melville; the fine likeness of Sir Walter Scott, seated with his dogs by ruined tower; and the broadly characteristic presentments of the Rev. Sir H. W. Moncreiff, Dr. Hutton, Adam Ferguson, Henry Mackenzie, Dugald Stewart, and Archibald Constable. In a goodly representation of Reynolds there is to be noted as of special significance the animated portrait of Dr. William Hunter in the act of lecturing. Very beautiful in colour is a bust of Lady Minto; full of charm alike in figure and landscape background is the full length of a Duchess of Buccleuch, though here the flesh colour shows just a little the effect of that decay of the glazings which in the group of the Ladies Montague has gone the length of compromising the modelling and reducing the flesh to an unnatural paleness. This process of fading is also observable in a half length of the Third Duke of Buccleuch; but sound enough, to all appearance, in colour, though in a rather dingy condition, is a head which one readily recognises as a thoroughly credible likeness of James Boswell. To Sir Joshua has been attributed the three-quarter length of a Duchess of Gordon, which, in the opinion of competent judges, ought rather to be assigned to Romney, and which certainly seems to bear that painter's sign-manual in the piquant pose of the figure and the dainty painting of the simple white dress. Noteworthy for the solid modelling of the head is a bust portrait by Romney of Macpherson, the redactor of Ossian, though it is difficult to identify the likeness with Reynolds's representation of the same person, which hangs close by. Among several fine examples of Sir Thomas Lawrence, special notice is due to a life-like head of the witty Dr. Moore, and a half-length of his heroic son, presenting among other merits a notably artistic treatment of the British military uniform. Gainsborough is represented by a refined head of Lord Chancellor Erskine, and one of George IV. as Prince of Wales, in which he hardly rises above the level of the fashionable court painter. Sir J. Watson Gordon is seen at his very best in a half-length of the late Principal Lee, highly noteworthy for the use made of greys in the modelling of the features; and there are also from his hand, in this room, excellent portraits of Sir James Hall and Sir T. M. Brisbane. Of the specimens of Geddes, the most interesting, artistically, is the full-length of Patrick Brydone reclining on a sofa, which has been reproduced by Ward in an effective mezzotint. Besides the portrait by Raeburn above referred to, there are more or less satisfactory renderings of Sir Walter Scott by J. Graham Gilbert, C. R. Leslie, Sir J. Watson Gordon, and Colvin Smith; while the novelist is seen in the midst of his family in the picture by Sir David Wilkie, well known through engraving, and again appears with two of his dogs in the sketch for Landseer's painting. Of Chalmers, again, there are several portraits, the best being that executed when the great preacher was well advanced in life by Thomas Duncan; to whose pencil is also due a cabinet full-length of John Wilson in sporting costume.

In the fourth room Sir J. Watson Gordon again figures largely with, among other portraits, the dignified and attractively-coloured



full-length of Lord President Hope in judicial robes; and the fine three-quarter lengths of Lord Rutherford, Lord Chancellor Campbell, and Principal James Forbes. Raeburn is also represented here by his likenesses of Home, Horner, and Jeffery; and Hoppner by a charming seated portrait of a lady in white, with background of admirably-handled landscape. Then there are a cold-toned but eminently-gentlemanlike portrait of the late Duke of Buccleuch, by Sir F. Grant, and a full-length of a member of the Buccleuch family, by Sir D. Wilkie; on whom is also fathered a rather feminine-looking likeness of the poet Campbell. The best manner of the late Sir D. Macnee may be seen in a portrait of George Combe; the less satisfactory style of his later years in an animated portrait of Robert Carruthers; by way of pendant to which is hung the vigorous three-quarter length, by N. Macbeth, of Carruthers' friend and brother journalist, Alexander Russel. A fine portrait of the Rev. Dr. Inglis, father of the present Lord President of the Court of Session, testifies to the skill of J. Syme; and in the hands of W. Dyce the head of Edward Irving, with its piercing eyes and long black hair parted down the middle, has certainly lost nothing of the weird fascination that helped to sway excited crowds. Scattered through this room are numerous portraits of artists, of which may be mentioned the fine head of Skirving by Raeburn, Sir F. Grant by J. P. Knight, Sir J. Watson Gordon by himself, a masterly *ipse pinxit* of Philip, and from the same hand heads of the late W. Brodie and James Cassie; the late Sir D. Macnee as a young man, by T. Duncan, and a bust likeness of the late D. O. Hill, which is perhaps one of the best bits of portraiture ever done by R. Herdman. Other works here from Mr. Herdman's pencil are a capital half-length of the late David Laing, a good likeness of the late Dr. Hanna, and an expressive head of Thomas Carlyle, whose portrait by Whistler, recently exhibited at the Salon, will also form a feature of the collection.

The fifth room contains several excellent examples of Allan Ramsay, including a head of Lord Elchies, particularly effective in colour; as also a number of portraits by Lely and De Medina. A three-quarter length of the first Earl of Rosslyn, attributed to Raeburn, looks as if the face had been painted by that artist, and the rest of the work by some other skilful hand; and near by may be seen the curious picture by Hogarth, full of character, if not without a dash of caricature, in which Lord Lovat appears, as is understood, in the act of counting off upon his fingers the number of days to elapse before his execution. On a screen in this room are a number of excellent portraits in crayons; and here too, as elsewhere throughout the rooms, is set out an interesting collection of busts; while in glazed cases are disposed engravings, miniatures, a fine set of Tassie medallions, and casts of Scottish portrait medals lent by the British Museum.

## THE ART LIBRARY, SOUTH KENSINGTON.

THE following is the report of Mr. R. H. Soden Smith on the acquisitions to the Art Library during the past year:—

The number of volumes and pamphlets acquired has been 2,294. Among these may be named two of the rare Venetian lace pattern-books; the earlier, entitled "Bellezze de Recami et Desegni," is extremely uncommon; it was brought out at Venice in 1558, and contains 20 pages of designs, many of great elegance, all in perfect condition, and including upwards of 100 patterns for lace borders; the other is also rare, "La Vera Perfectione del disegno de varie sorti di ricami," &c., by Giovanni Ostaus, Venice, 1591; a rare work of Du Cerceau, containing elaborate engravings of ornament of the date 1594—a beautiful little volume in its original stamped vellum cover; a curious book containing receipts for dyeing and colouring, &c., sm. 4to., 1605, translated from the Dutch by Leonard Maskall, the author of "A Booke of Fishing with Hooke and Line," &c.; a fine series of the engraved works of Le Pautre, about 1,000 prints collected in 7 folio volumes (these volumes formed part of the Townley Library, and represent very fully the various works of the great French decorative artist); Turner and Girtin's "River Scenery," 1823-30; two early publications by David Cox, now become rare, his "Lessons in Water Colours," 1823, and the "Young Artist's Companion," 1825; several works illustrating costume, as "Lami, Bal costumé," fol., 1829; "Petit Courier des Dames," 43 vols., 1835-57; "Costume du Theatre français," 5 vols. 4to.;—Gerhard, Griechische Vasenbilder, 4 vols., 4to., 1839-58; "Canina, Antica Etruria Marittima," 2 vols., fol. 1846-51; Stirling-Maxwell, "The Victories of the Emperor Charles V.," designed by Heemskerck in 1555, portraits, prints, &c., added, fol. 1870; a few works on natural history selected for their successful illustrations, as the "Game Birds of the United States," fol. 1878, and the "Game Fishes of the United States, 1879"; various publications having for their object the more complete illustration of the works of the great masters, as Amand-Durand's "Eaux-Fortes et Gravures des Maitres anciens, 1870-72; Unger, "Musée National d'Amsterdam."

Some additions have been made to the class of illustrations of early printing and book ornament. The increasing zeal of col-

lectors in this direction both at home and abroad renders it difficult now to acquire specimens except at prices practically prohibitive for the Art Library. Among the acquisitions may be mentioned an early black letter "Rosario Gaudioso," imperfect, but with numerous wood engravings and ornamental borders to each page; Ambrosio Montesino "Epistolae y euangelios," containing wood engravings and ornamental initial letters, folio, printed at Toledo, 1512. (Toledo printing of that date is not common.) "Missale Ord. Sanc. Benedicti" (Germany), very fine black letter type, with borders and initial letters rubricated, printed at Hagenau in 1518; this is also a fine example of stamped leather binding of the period. "Missale Romanorum," folio, printed in red and black, with full-page engravings and elaborate initial letters, Antwerp, Plantin Press, 1572.

The collection of bookbindings has received some additions; the observation previously made respecting early printing applies, however, with even more force to the attempt to collect bookbindings—the prices now obtained for rare or fine examples would have been deemed incredible a few years ago. A curious piece of early Flemish binding of the fifteenth century has been acquired, in leather, moulded with figures in relief of St. John the Baptist under a Gothic canopy (inserted in a large folio modern cover with brass corners and clasps); a specimen of Nuremberg binding of the end of the fifteenth century, folio, enriched with stamped diaper and other ornament, with original brass corners, centre ornament, and clasps; a curious sixteenth-century binding in green velvet, German ("Vita Phil. Melanchthonis"), stamped on one cover with figure of Luther, and having inserted on the other a stamped and coloured portrait-figure on vellum of Melancthon; various examples of stamped hogskin, of Flemish and German origin, some initialed with the names of the designers, and several dated. The admirable skill shown in these bindings is at length beginning to be widely appreciated, but fortunately the Art Library has already secured a fair representation of this class of art workmanship. There may also be mentioned a small leather binding, Antwerp, 1558, in stamped calf, with graceful border ornament of foliage with birds; another of similar style has also been secured, elegant in design, but not in as good condition as could be desired; a specimen of Venetian stamped vellum of very good design, of the date 1570; another Venetian example, but in dark crimson morocco, about 1583, very richly gilt with foliated arabesques; a French crimson morocco binding, tooled and gilt with royal crown and collar of St. Esprit, dating from 1661 (this came from the Townley Library); a southern German binding in crimson morocco, tooled, of the first half of the eighteenth century; two English examples in red morocco, much gilt, dating respectively from 1714 to 1744, the latter inlaid with white leather richly tooled.

It has been found necessary to purchase duplicates of a considerable number of works much used in the reading-room or required for circulation to provincial schools; also in some cases to supply the place of copies practically worn out by almost daily use during about twenty years; many more are still needed. Among the duplicate copies may be mentioned:—Pistolesi, "Il Vaticano," 8 vols., fol., Rome, 1829-38; "Sir Joshua Reynolds's Engraved Works," 3 vols., fol., 1833; Nash's "Mansions of England," 4 vols. (original issue); Britton's "Cathedral Antiquities," 5 vols., 1836; Colling's "Gothic Ornament," 4to., 1848; Pfnor, "Palais de Fontainebleau," 2 vols., 1863; Meyrick's "Ancient Armour," 3 vols., 4to., 1842; "Les Emaux de Petitot," 2 vols., 1862-64; also a series of the "Gazette des Beaux-Arts," from 1869.

The number of original drawings acquired has been 2,822, of these 195 have been presented.

Among the latter may be mentioned a series of 120 pen sketches in Spain, by the late Sir M. Digby Wyatt, presented by Lady Wyatt; chalk studies of drapery, by Sir F. Leighton, P.R.A., presented by himself; an Italian coloured drawing of an altar-piece from the original, by Luca della Robbia, presented by Lady Bouchier. Of the drawings purchased may be mentioned a most interesting series of 248 original illustrations, folio size, of Hindoo costume, by Balthazar Solvyns, a Flemish artist who brought out in Calcutta in 1799 an important work on the native costume in a series of etchings, by himself; these drawings, executed about 1798, are the originals which he made for his subsequently-published plates. A set of fifteen large and elaborate illustrations of the decorative details of the "Taje Mahal," Agra, giving full-size examples of the beautiful inlay work; a valuable collection of 140 drawings of fruit and flowers, beautifully coloured, which were executed for John, Count of Nassau, by John Walter about 1654, from plants growing in the gardens of the Count's palace in the Duchy of Nassau. These drawings were acquired by the Earl of Bute, the minister of King George III., and bound for him in two handsome volumes; on the dispersion of his library they were obtained for Mr. Beckford, and thus came to the Hamilton Palace Collection, from which they were bought for the Art Library. A set of eighty-two drawings of details of Classical architecture made by Robert Adam about 1750; six very interesting drapery sketches in oil, by Hogarth; upwards of thirty original studies, by Flaxman; academical and other studies, by Stothard, West, &c.; pencil drawings by Prout; many studies of sky, trees, and details of foliage by Varley and others; a collection of designs



for various decorative objects, also for architectural ornament by various Italian and other artists; a series of drawings of ancient armour and weapons by the late Lieut.-Colonel C. Hamilton Smith; a very highly-finished drawing on a large scale, in colours heightened with gold, of a twelfth-century altar frontal in the Wallraf-Richartz Museum, Cologne.

The collection of early illuminations has received the important addition of 355 pieces, chiefly initial letters from MSS. of the thirteenth to fifteenth centuries, including examples of the Italian, French, German and Flemish schools of missal painting.

The number of engravings, etchings and woodcuts added to the collection has been large, in all 18,107; of those presented may be mentioned a series of eighty etchings by F. Goya, published 1799; and a collection of 262 engravings issued by the Calcografía Nacional, Madrid. Among the purchases are many classed series of architectural objects and decorative details, as towers and spires, chimneypieces, staircases, doorways, pulpits, &c., besides croziers, chalices, vases, book-titles, and other series which are being completed for the special use of students of ornamental art; a few additions have been made to the collection of the works of the "Little Masters" of the early German school; also to the woodcut book ornament of the fifteenth and sixteenth centuries; a large and curious collection of upwards of 1,000 title pages, frontispieces, colophons and other book ornament, in six folio guard books, has been acquired, also another set of such subjects numbering more than 300, together with about 130 printers' devices, head and tail pieces, &c., besides large additions to the collections of woodcut and other initial letters; the series of book illustrations of the last century has been added to as well as that of portraits of artists.

The number of photographs added to the collection has been 1559. Among these, which for the most part are printed by processes believed to be permanent, may be mentioned a set of illustrations presented by M. de Champeaux, of decorative furniture exhibited by the "Union Centrale des Arts décoratifs" in Paris; a collection representing objects of antique art in the Royal Museum at Naples; several important series of autotypes illustrating the contents of the great European collections; among these last are 400 representing the paintings in the Prado Museum, Madrid, and a small series of the paintings in the Academy of San Fernando; upwards of 300 historical portraits exhibited at the Trocadero, Paris; the collection as far as yet issued of the paintings in the galleries of the Hermitage, St. Petersburg; also large illustrations of the decorative designs for the Opera House, Paris; the society for photographing such remains of Old London as still are permitted to exist has issued a few photographs, of which two sets have been acquired.

### THE FOUNTAINE SALE.

THE following statement respecting the objects purchased by the syndicate at the Fountaine sale has been written by Mr. J. C. Robinson:—An estimate was in the first instance made by Mr. Franks and myself of the probable price which each of the chosen specimens might be expected to realise, and the result of the sale was, we think, not less remarkable than satisfactory. While, as was sure to be the case, some of the objects, the greater number in fact, were sold for less than our estimated prices, others considerably exceeded them; but, taking one lot with another, the aggregate amount paid for the entire series was, on a gross sum of nearly 10,000*l.*, about 200*l.* under our estimate.

Nearly thirty years ago Mr. Franks and myself were commissioned by the Government of the day to select and purchase works of art at the sale of the Bernal collection for the respective museums with which we were officially connected. The late Mr. Andrew Fountaine also made many purchases at the Bernal sale to add to his ancestral collections. We were both intimately acquainted with him, and although he was an enthusiastic collector, he generously stood aside and waived his own pretensions whenever any particular specimen was especially wanted for the nation. This was more especially the case in the ceramic section. For this reason, in particular, Mr. Fountaine did not obtain the real gems of the Bernal sale; these, for the most part, unquestionably went to South Kensington and the British Museums. But the specimens bought at the Bernal sale by Mr. Fountaine have again been brought to the hammer at Messrs. Christie's, and, on the average, they have realised at least ten times the sums they cost him. Shortly after the Bernal sale, in 1856, came the purchase of the Soulages collection for South Kensington, effected in the first instance by a syndicate, exactly as has now been done at the Fountaine sale. Curiously enough the guarantee fund raised on that occasion amounted to about the sum now contributed—about 24,000*l.*—while the cost of the collection was about 11,000*l.* There was endless trouble and demur before the Soulages collection was finally taken to by the nation, but it was one of the most splendid and successful acquisitions of the kind ever made by any country. I think those who know will bear me out when I say that the Soulages collection would now, as a whole, sell for at least five times the price paid for it, while the objects in certain

sections would attain a far greater rate of advance. Most assuredly a similar result might be counted upon in the future in the case of the objects now under offer to the nation by the Fountaine syndicate. Now for a less satisfactory picture. It is the fact that, with the exception of the objects secured by the syndicate, nearly all the principal specimens in the Fountaine collection, whether bought at the sale by English or foreign agents, were acquired for Continental collectors, and are now practically lost to the country.

The most beautiful and precious work of art in the collection—the ivory horn—has gone to Paris, not to Vienna as at first reported. This coveted work was lent by the syndicate to be dealt with by the authorities of the South Kensington Museum, and it was expected that a vigorous effort would be made in that quarter to secure it. The biddings on the part of the museum ceased, however, at 2,000*l.*, and the real competition was between a spirited Bow Street expert and a wealthy Parisian collector. Had the prize fallen to the former gentleman it would have been his object to resell it at a profit. As it is, it has passed into the most splendid and precious collection of works of decorative art formed in our time. In this unrivalled gathering many of the chief treasures have been year after year gleaned in this country, to which it is now certain none of them will ever again return, for it is understood that the entire collection has just been formally made over as a gift to the museum of the Louvre.

I apprehend that the foregoing facts speak for themselves; one thing they seem to attest is that whereas only a few years ago we led the way as a nation in the matter of industrial art collections, we have now fallen into the second rank, if not lower even, in this respect.

But this is no slight matter. It would be easy to show how direct and how great has been the influence of these art gatherings on our national manufactures. Can we afford to run the risk of being outstripped in this last field also?

### RIVAL SYSTEMS OF HEATING.

TWO articles on heating, by Dr. A. N. Bell and Professor W. P. Trowbridge, have appeared in a late number of the *North American Review*, from which we take the following extracts:—

Dr. Bell writes:—So important and rapid have been the improvements in the construction of stoves in the United States with the last eight or ten years, that it is difficult to find a market for those of older date. In England, where the people continue to be wedded to open grates, and where most is said by scientific persons against the use of stoves, improvements have been exceedingly slow and complicated, and the practicability of maintaining a sufficient and equable temperature and a wholesome atmosphere in a room warmed by a stove is far from being realised; still less the convenience of warming several rooms at the same time by the same means, hot-air furnaces scarcely being known.

The essentials for healthy stove-heat are a brick-lined fire-chamber, exhaust-flue for foul air, means for supplying moisture, and provision for fresh-air supply. A brick lining is requisite for the double purpose of preventing overheating, and for retaining heat in the stove. For the supply of moisture, the means are simple and easy of control, but often inadequate. An efficient foul-air shaft may be fitted to the commonest of close stoves by simply enclosing the smoke-pipe in a jacket—that is, in a pipe of two or three inches greater diameter. This should be braced round the smoke-pipe, and left open at the end next the stove. At its entry into the chimney, or in its passage through the roof of a car, as the case may be, a perforated collar should separate it from the smoke-pipe. For stoves with a short, horizontal smoke-pipe, passing through a fire-board, the latter should always be raised about three inches from the floor. A smoke-pipe thus jacketed, or fire-board so raised at the bottom, affords ample provision for the escape of foul air.

The introduction of fresh air is a comparatively easy matter, when by no more special provision, then by a strip of board under the window-sash, closely fitted. The lap of the sash at the middle admits the air with a direction to the ceiling, and, consequently, without draft on anyone in the room.

The experiments of Petenkoff have shown that, under the common conditions of the atmosphere, a very considerable exchange of gases takes place through dry plastered walls, brick, and stone. And it is the common experience of sick persons that they are sensitive to drafts through walls when the wind blows, and that they frequently take cold by exposure to the windy side of the house.

All flues for the exit of foul air should be perfectly smooth and tight. Rough surfaces not only retard but retain emanations which come in contact with them. Moreover, exhaust-flues should never be placed in outer cold walls, because the greater density of the outer cold air prevents the ready ascent of the warmed and rarefied air from within. Another important consideration is the size of air-shafts. This can only be approximate, however, be-



cause the amount of air which will pass through a shaft depends in a great degree upon the relative temperatures of the inner and outer atmospheres, and the conditions of the weather, particularly the direction of the wind. As a practical average, the best observers recommend that the sectional area of both inlet and outlet shafts be 24 square inches per head; or, for buildings of three storeys, one square inch for every 50 cubic feet of space; rooms below, one square inch for every 55 cubic feet; for ground floors, one square inch for every 60 cubic feet. It should be borne in mind that the friction in long flues considerably lessens the extractive power, and that the column of air in the flue increases in density as it ascends. In prisons, where the cubic space per head is comparatively small, the sectional area of the air-shafts should be at least 20 square inches per head.

Open fire-stoves combine the advantages of the open fireplace and the close stove, provide for fresh air, and economise heat. The important improvements in stoves of this kind have not only well-nigh supplanted the open fire-grate in supplying all that was ever claimed for it, but excel it in all the requisites of economy and comfort.

Hot-air furnaces are simply enclosed stoves placed outside the apartments to be warmed, and usually in cellars or basements of the buildings in which they are used. The manner of warming is virtually the same as by indirect steam heat—by the passage of air over the surface of the heated furnace or steam-heated pipes, as the case may be, through flues or pipes provided with registers. The most essential condition of satisfactory warming by a hot-air furnace is a good chimney-draught, which should always be stronger than that of the hot-air pipes through which the warmed air is conveyed into the rooms, and this can be measured by the force with which it passes through the registers. A chimney-draught thus regulated effectively removes all emanations; for, if the chimney-draught exceeds that of the hot-air pipes, all the gaseous emanations from the inside of the furnace, and if it have crevices, or is of cast-iron and overheated, all around it on the outside, will be drawn into the chimney. Closely connected with this requirement for the chimney-draught is the regulating apparatus for governing the combustion of fuel—the draught of the furnace. This should all be below the grate; there should be no dampers in the smoke-pipe or chimney, and all joints below and about the grate should be air-tight. The fire-pot should be lined with brick and entirely within the furnace, but separate from it, so that the fresh air to be warmed cannot come in contact with the fuel-chamber.

It should go without saying that the air which passes from furnaces into living-rooms should always be taken from out of doors, and be conveyed in perfectly clean air-tight shafts to and around the base of the furnace. Preferably, the inlet of the shaft, or cold-air box, should be carried down and curved at a level (of its upper surface) with the bottom, and full width of the furnace. Thus applied, the air is equally distributed for warming and ascent through the hot-air pipes to the apartments to be warmed. On the outside the cold-air shaft should be turned up several feet from the surface of the ground, and its mouth protected from dust by an air-strainer. A simple but effectual way is to cover the mouth with wire cloth, and over this to lay a piece of loose cotton wadding. This may be kept in place with a weight made of a few crossings of heavy wire, and it should be changed every few months. And here, too, outside the house, should be placed the diaphragm for regulating the amount of cold air supply, and not, as commonly, in the cellar.

As the best means of regulating the temperature and purity of the atmosphere from hot-air furnaces, it is necessary to provide sufficiently large channels for both the inlet of fresh air and its distribution through the hot-air pipes. The area of the smallest part of the inlet (or inlets, for it is sometimes better to have more than one) should be about one-sixth of a square foot for every pound of coal estimated to be burned hourly, in cold weather; and to prevent, in a measure, the inconvenience of one hot-air pipe drawing from another, the collective area of the hot-air pipes should not be more than one-sixth greater than the area of the cold-air inlet. These proportions will admit the hot air at a temperature of about 120 degs. when at zero outside, and the velocity through the registers will not exceed five feet per second.

A large heating surface of the furnace is a well-recognised condition of both economy and efficiency. As a rule, there should be ten square feet of heating surface to every pound of coal consumed per hour, when in active combustion; and the grate area should be about one-fiftieth of that of the heating surface. For the deficiency of heat, or the failure of some of the hot-air pipes of hot-air furnaces in certain winds and weathers in large houses or specially exposed rooms, the best addendum is an open fire-grate. With this provision in northerly rooms to be used occasionally, hot-air furnaces may be made to produce all the advantages of steam-heat in even the largest dwelling-houses.

Professor Trowbridge writes:—The system of steam-heating apparatus, or its practical equivalent in limited circuits, the hot-water apparatus, is being gradually extended even for ordinary dwellings, while for large blocks, such as apartment-houses, hotels, manufacturing establishments, school-houses, and other large structures, the system is so greatly in demand as to have given

rise to new and extensive industries devoted to the manufacture and instalment of the necessary apparatus.

Steam heating is characterised by the fact that the heat is generated in the furnace of a boiler either within or without the walls of the building to be heated, the heat of combustion being transferred to water, which, being vapourised, constitutes the medium by which the heat is conveyed in comparatively small pipes to the points where it is utilised for heating purposes. Two distinct methods of utilising this heat are practised. In one the steam pipes are carried, by the most convenient course, directly into the room or space to be heated, where, by convolutions of the pipe, or what are known as radiators, an extended heating surface is furnished to the room. These coils, or radiators, give off heat both by radiation and by contact with the air, which is kept slowly circulating, as in the case of a close stove; and it is evident that only a feeble, or at least uncertain, ventilation is possible, except through special arrangements made for introducing fresh air. These heated coils are, in effect, identical with close stoves, the only difference being that the surfaces of the coils can never be heated to a degree higher than that of the steam—practically, never higher than three hundred and ten nor lower than two hundred and fifteen or two hundred and twenty degrees Fahr., while the surface of the close stove may, under some circumstances, approach nine hundred and fifty degrees. Active and sufficient ventilation may be attained with these coils, however, if they are placed in such a way that cool air, introduced through openings—as, for example, under windows—will mingle directly with the heated air rising from the radiators, and then be deflected upward to be mixed with the general circulation, and discharged through ventilating flues. Of course, such active ventilation can only be attained at the expense of additional heat.

The other method, called by a strange misconception “indirect radiation,” consists in conveying the steam from the boiler to small chambers constructed for the purpose, in the basement, directly beneath the rooms to be warmed. Here the steam pipe is extended into a coil, or an equivalent arrangement, by which a large amount of steam-heated surface is exposed. Flues for heated air lead from the roof of the chamber to the various rooms to be heated; an inlet duct for fresh air enters the bottom of the chamber, and the coils or “radiators” are so arranged that the air in rising comes in contact with the heated surfaces, and passes to the apartments to be warmed with the temperature increased to seventy or one hundred degrees Fahrenheit. Low temperature currents only are generated; and as the proper action of the apparatus can be kept up only by a continuity of flow into and out of the space to be heated, the two effects of heating and ventilation are most effectively combined.

A comparison of these various methods must include the cost of the apparatus, the cost of attendance, the cost of fuel, and the incidental advantages and disadvantages belonging to each. The open fireplace possesses the advantage of giving thorough ventilation, but it is the most expensive in fuel. The close stove is highly advantageous in point of economy, where there is little ventilation, and as this is apt to be the rule, it is perhaps the least healthful of all methods as generally applied. Both of these methods become costly in attendance as well as in fuel when the heating of dwellings of many rooms is required, and are inapplicable to large structures and public buildings as they are now constructed. The hot-air furnace system is of all the most difficult to manage, so far as uniformity and control of temperature is concerned. The danger from fire, the dust, the defective ventilation, and the impracticability of heating more than a limited space by a single hot-air furnace are other defects inherent in this system. Steam heating involves greater first cost in apparatus than any other system. When this cost and the cost of attendance and repair are taken for a series of years, however, it is conceded that there is but little choice between hot-air furnaces and steam-heating apparatus as regards economy.

It is only to be remarked that the most thoughtful among our physicians and sanitary advisers realise with anxiety the fact that there is a growing abuse of all these systems, except the open fire, in providing too much heat and too little ventilation. There is no mode of heating which lends itself to the correction of this evil so readily, however, as the steam-heating method. With proper care on the part of architects in arranging inlet ducts for fresh air, and ventilating flues heated by steam coils to accelerate the draught, any desirable degree of ventilation with low temperature currents may be secured. Such arrangements should, however, be studied in advance, and form principal elements in the design of a building, instead of being wholly subordinate, as is commonly the custom, to less important architectural features. It should be regarded as a fundamental principle in architecture that the first and most important problem to be studied, after the general design of a building is determined, is the proper positions and magnitudes of heating and ventilating appliances for the structure as a whole, and for each room in particular; and not only should the details of the main and cross walls be modified and adapted to these arrangements where it is necessary, but no question of mere architectural propriety or appearance, nor even of convenience in use, should be allowed to interfere with objects so important to health as good and sufficient warming and ventilation.



## NOTES AND COMMENTS.

THE Committee of the House of Commons have decided against the Bill which was to enable the inhabitants of what is called the Lower Thames Valley to purchase land near Mortlake as a receptacle for sewage. It is understood that the Bill was thrown out not so much on account of its demerits, as from a difficulty in connection with two of the districts affected by the scheme. The result will be gratifying to inhabitants on the banks of the Thames, and to people who use the river for boating. But the original difficulty still remains. The inhabitants of the Lower Thames Valley district have been trying for years to satisfy the law in regard to sewage disposal, and they must have expended at least 50,000*l.* on engineers and lawyers. They are prohibited from using the Thames, and they cannot obtain land within a reasonable distance. Unless they undergo the enormous expense of bringing their sewers to the coast, it would appear that they must break the law. It is now doubtful whether the separate districts in the Thames Valley will be able to get rid of the sewage.

It is only an Irish member who could imagine there was a danger to the State in the simple patterns which are devised as a test of elementary drawing. In one which was given in the Irish examinations by Mr. CARROLL, a teacher of art in London, the principal figure was an old Celtic harp, an object which combines graceful contours with straight lines. To add to the task, a heart was placed above the harp. It was this simple thing which was interpreted as being a symbol of treason against the British Empire, and accordingly was brought under the notice of the House of Commons. The Archbishop of CANTERBURY might with as much reason allege that the pagan statues and ornament used in schools are instruments for the subversion of Christianity. In the harp case it was gravely explained that the figure was without political meaning, but it was hardly necessary to waste words on such a subject.

THE Corporation of London are about to decide on the figures which are to adorn Blackfriars Bridge. There are four pedestals, and six competitors were invited to compete for the equestrian groups. Mr. WOOLNER declines to take part in any competition, and there are consequently only five artists for four prizes—a state of things which would be impossible in architecture. The five subjects comprise four kings and one mayor. Mr. BELT has selected *William III.*, Mr. BIRCH *Henry V.*, Mr. BROCK *Edward III.*, Mr. THORNYCROFT *Edward I.*, and Mr. ADAMS *Fitz-Alwyn*, the first mayor of the City. The competition has hardly been conducted with the prudence that was expected from a body like the London Corporation. No opportunity has been given for discussing what kind of sculpture would be most suitable, and the experiment was not tried of opposing a group to the equestrian statue which was placed temporarily on a pedestal. Critics would not be unanimous about the fitness of equestrian figures for the bridge.

MR. ROBERT CHRISTIE, of George Street, Portman Square, has imported a collection of Japanese wall-papers which are of new designs. The ground in many of them is lighter than in the papers which were first produced for the English market, and, indeed, for some patterns it is a pure white. The designs are all good in character; some appear to have been derived from French and Italian Renaissance work, and the printing of the pieces has been carefully executed. The collection should be seen before it is entirely dispersed. Fine Indian fabrics and rich French hangings, which are also new, are to be found in the same house, with examples of ancient and modern furniture. They are all of a superior class. Mr. CHRISTIE has the advantage of being an artist, and whatever he purchases is certain to possess beauty in form and colour.

THE conversazione of the Society of Arts at the Health Exhibition on Wednesday was thoroughly successful. The crowds which attend on those occasions testify both to the influence and the hospitality of the Society. Both within and without the Exhibition there was much to gratify the sight, and in addition there were the rival English, French, and German

bands. As a foil there was a musical entertainment by Chinese artists, and it would be difficult to imagine noise more discordant. The grounds were lighted in a new and pleasing manner; and, in fact, the entire arrangements left little to be desired.

THE report has been issued of the Cockburn Association, which is established in Edinburgh, and has for its object the amenity of that city. An objection is raised in it against holding exhibitions by which the beauty of some park or pleasure ground is sacrificed, and that a site should be allotted outside the city for cattle and other shows. The Council have been informed by the Secretary of State for War that the Parliament House in Edinburgh Castle will be restored, as preliminary arrangements are being made by which it is hoped that this building may be diverted from its present appropriation to uses more in harmony with its history and associations. The purchase of Blackford Hill by the municipality is considered to be the most notable addition made to the amenity of the city since the formation of the Association. The Council think that something might and ought to be done to improve the appearance of the Waverley Station at its west end, adjoining the Waverley Bridge, which has long been in a disgraceful condition. The city has, they say, suffered irreparable injury to its amenity by the railway being constructed through its midst, and the least thing the directors of the railway company could be asked to do was to make their parcel-office as inoffensive as possible. Regarding the sale of the ground adjoining Holyrood Palace for the purposes of a brassfoundry, the report says the acquisition of any of the ground in that neighbourhood which can be had seems to deserve the serious attention of the Government, and it is earnestly hoped that they will spare no effort to prevent such a work as a brassfoundry from vulgarising the vicinity of the ancient residence of the kings of Scotland. In reply to a communication from the Association with reference to the contemplated erection of a foundry in the vicinity of Holyrood Palace, the Board of Works have stated that they do not feel it incumbent upon them to take any action in the matter.

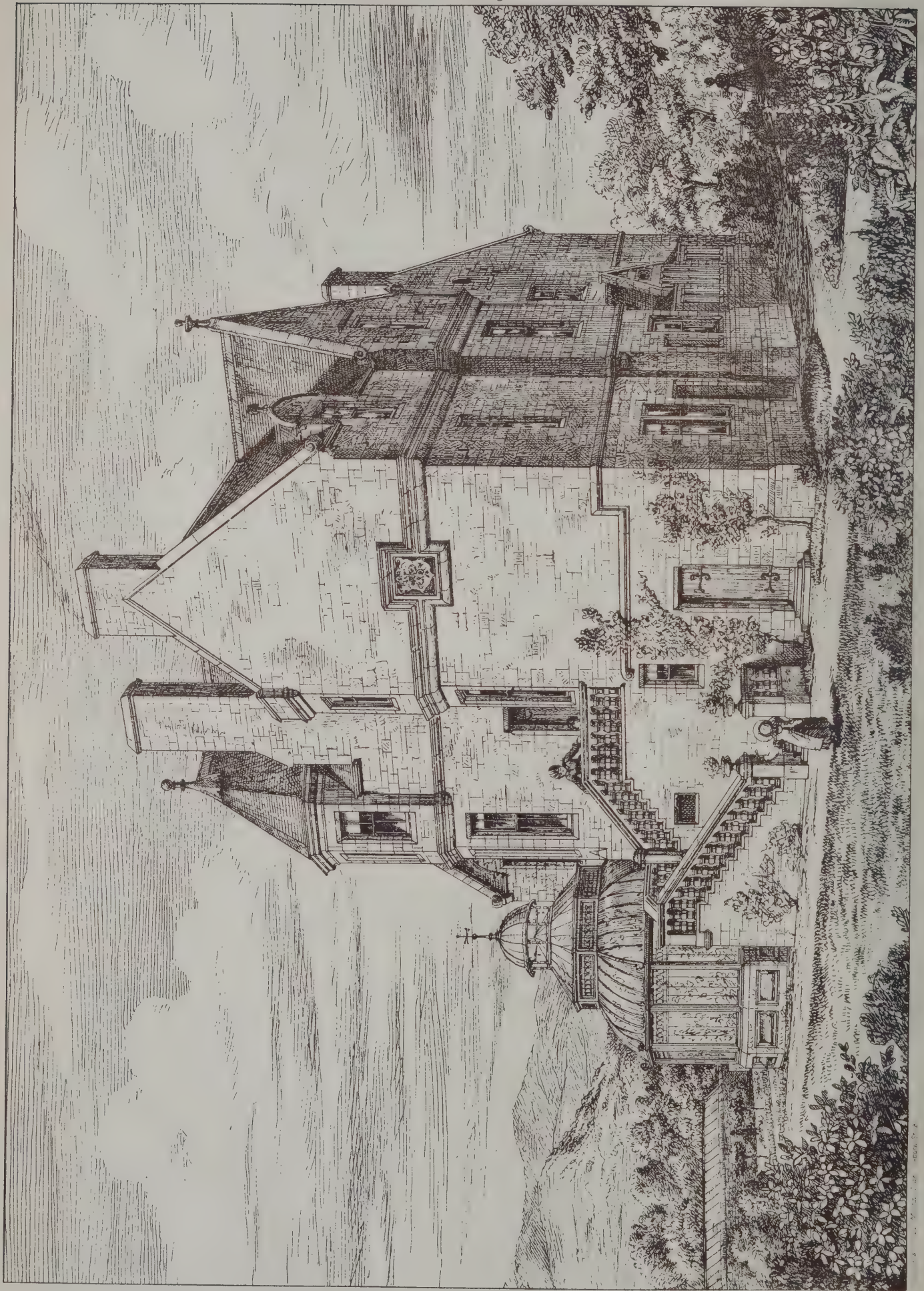
MR. WALTER SMITH, of the Bradford Technical College, who has had much experience in conducting English and American art schools, has written a paper on the present position of the schools in this country. Mr. SMITH maintains that although the Department schools may not be as much of a failure to-day as Schools of Design were felt to be in 1852, yet the existence of a Royal Commission on Technical Education in Art, Science, and Industry, indicates that fresh life is needed in them, and it is highly probable that before very long Parliament may be called upon to consider and legislate upon a national scheme of technical or secondary education, involving the reorganisation of the Science and Art Department, and the entire remodelling of schools of art. Mr. SMITH is emphatic in condemning the popular fallacy that schools of art should be self-supporting. It is utterly illogical, and very impractical, he says, to suppose that young artisans can pay the full value out of their weekly wages of the technical education they need in schools of art, when the aristocracy and the wealthy middle classes do not and are not called upon to pay the whole cost of the education of their sons in the public schools, grammar schools, and universities. Mr. SMITH believes that schools of art will never enjoy full and healthy and useful life so long as they are, as now, largely dependent upon voluntary support, but will do so when they are recognised as public institutions existing for the public good, under municipal management and control.

NEW baths are to be erected in Bradford, and it was at first proposed that the plans should be prepared by the Borough Surveyor. The committee having charge of the scheme wished to have a design by an architect, and suggested that there should be a competition among the Bradford architects. The question was brought before the Council on Wednesday, and by the casting vote of the Mayor it was decided to entrust the work to the Borough Surveyor. As a set-off to this, it may be mentioned that the Council are about to erect municipal buildings, and the works are to be entrusted to Messrs. W. & R. MAWSON, the architects of the town-hall which imparts so much dignity to Bradford.







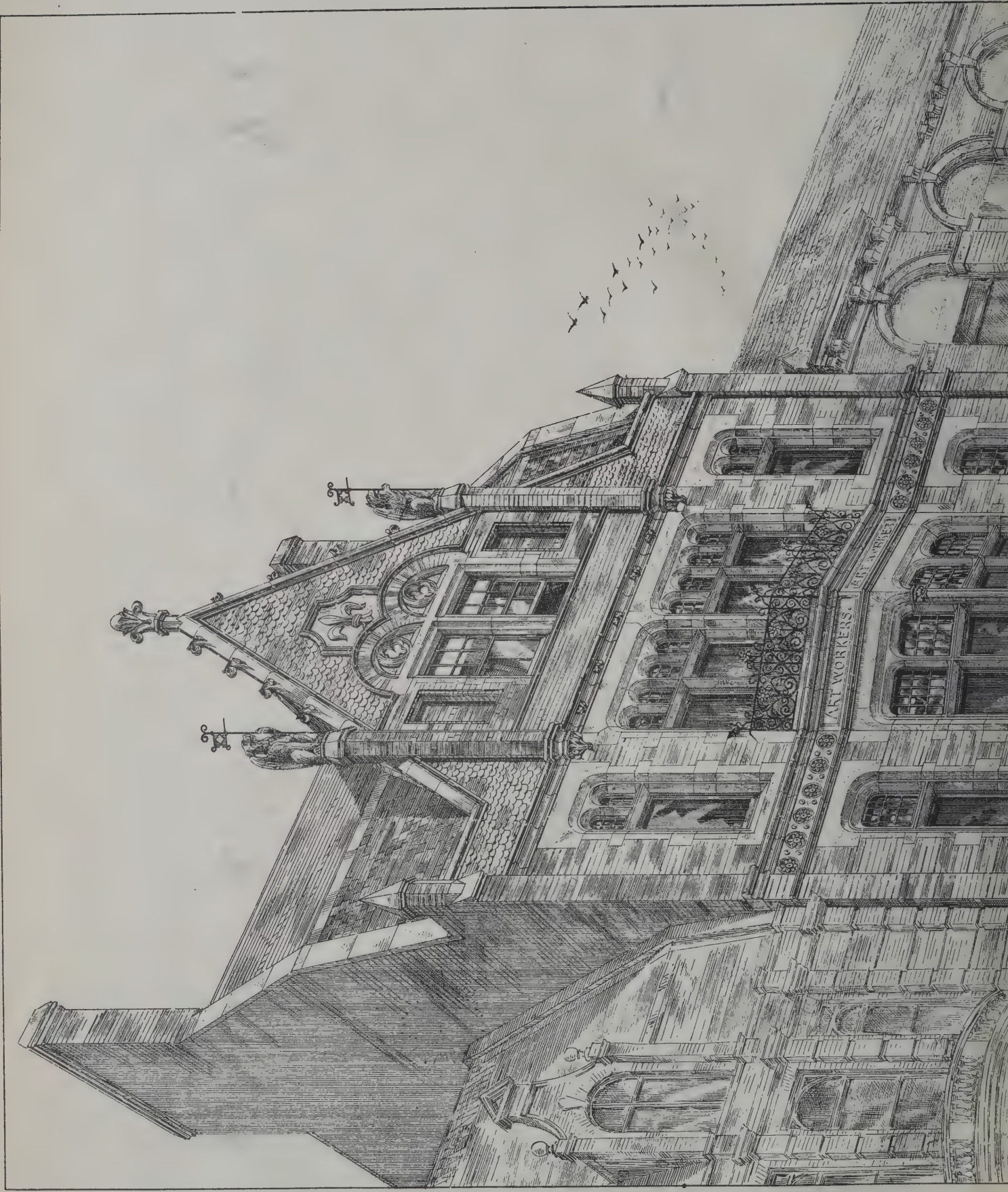


HOUSE IN OSWALD ROAD, EDINBURGH.  
R. MORHAM, ARCHITECT

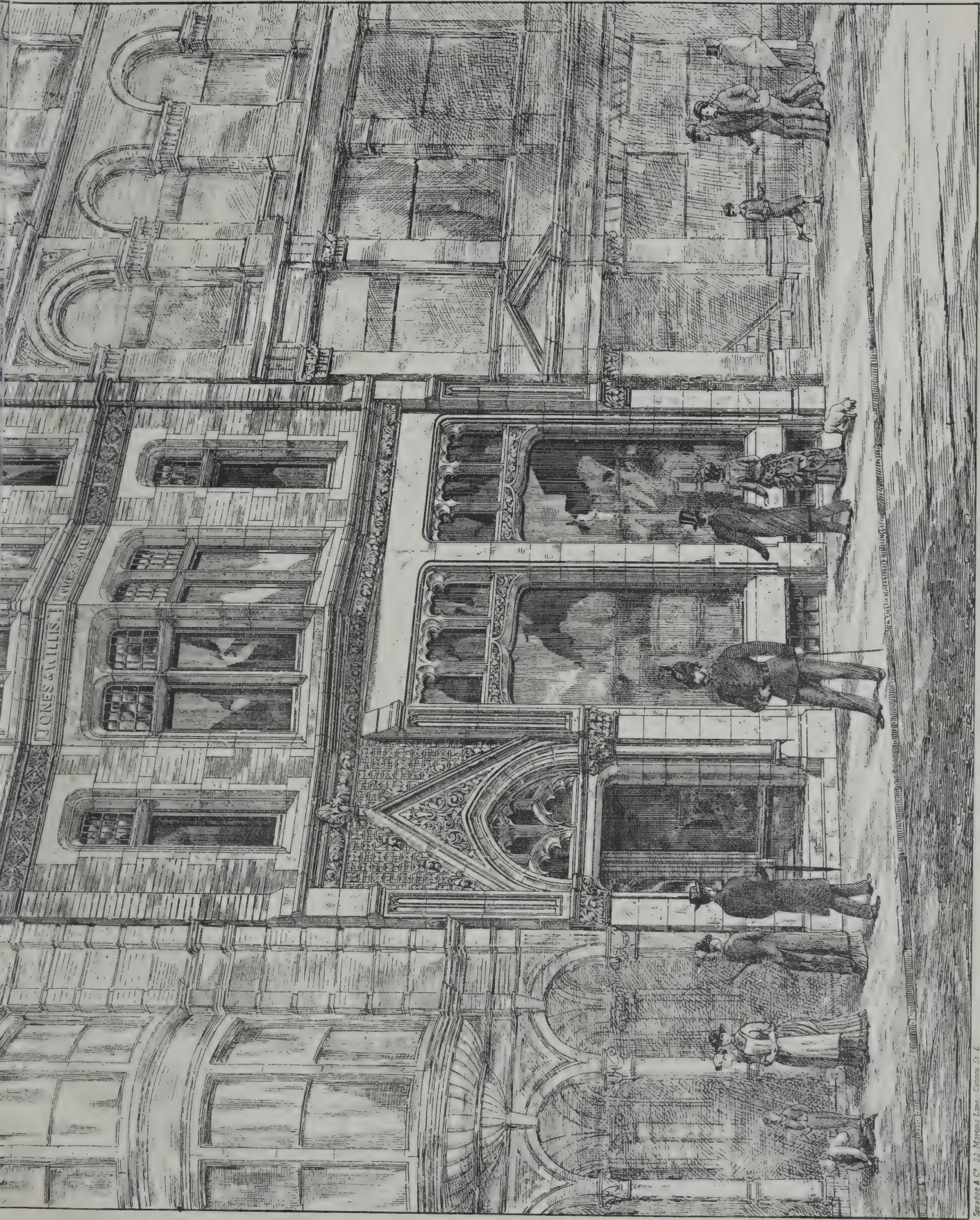












SHOW ROOMS AND OFFICES EDMUND STREET BIRMINGHAM A.B. PIPSON & SON ARCHITECTS BIRMINGHAM  
FOR JONES & WILLIS













"INK-PHOTO," SPRAGUE & CO., LONDON.

PUBLIC HALL & NEW BUILDING

MESSRS HABERSHON & P



Aug 12<sup>th</sup> 1884.



INGS, ROATH, CARDIFF.

CKNER, ARCHITECTS.









· ENTRANCE · TIDDINGTON · HOUSE · OXON ·  
· Mess<sup>rs</sup> · Morris · & · Stallwood · Architects ·







## ILLUSTRATIONS.

SHOWROOMS AND OFFICES, EDMUND STREET, BIRMINGHAM, FOR MESSRS. JONES & WILLIS.

THESE premises have been just erected from designs by Messrs. PHIPSON & SON, as offices and showrooms in connection with Messrs. JONES & WILLIS's works, Porchester Street, Birmingham, and Euston Road, London, and are built especially for the better display of their manufacture in art metal, wood, and stonework, combined with their old-established furnishing business. The new buildings are necessary, as the premises in Temple Row, Birmingham, which were used as showrooms by Messrs. JONES & WILLIS are about to be demolished, having been acquired by the Conservative Club Company as a site for the new club.

## PARK HALL AND NEW BUILDINGS, CARDIFF.

THE large block of buildings shown in the illustration has been for some time in course of erection on the site of the old Cardiff Theatre in Crockherbtown. It comprises two public halls, one large and one small, a first-class hotel, ten shops, and a coffee tavern, and is owned by the Park Hall and Hotel Company (Limited). In size the building far surpasses all others in Cardiff. There are frontages to Park Place and Crockherbtown. The principal materials used are Forest of Dean and Newbridge stone, relieved with Bath stone and terra-cotta dressings. The ten shops face Crockherbtown, the chief thoroughfare. They are all spacious, and eight of them have dwelling-houses attached. The shop at the south-east corner of the building, which will be fitted up as a coffee palace, has in addition a large coffee or dining-room, 49 feet by 21 feet 6 inches, and also a ladies'-room, billiard-room, smoking-room, and everything necessary for the trade. The greater part of the Park Place façade is occupied by the hotel. It has a coffee-room, 44 feet by 29 feet; a commercial-room, 44 feet by 30 feet; a ladies' coffee-room, a private dining-room, a large billiard-room, and about one hundred sitting-rooms and bedrooms, with all the conveniences usually to be found in first-class hotels. The large public hall, which adjoins the hotel, has its principal frontage to Park Place, and is entered immediately from that street, with which the ground floor is level. In designing this hall the architects took especial care to provide against the evil results of a panic. With this view they put in no less than ten doors for egress, all of which open outwards. The auditorium of the large hall is 127 feet long, 65 feet wide, and 53 feet high, and it will give sitting accommodation to fully 2,500 persons. The interior will be decorated with a panelled and coved ceiling, supported by fluted pilasters having Corinthian capitals, and provided with a balcony or dress circle. The orchestra will hold 250 performers, and the hall will contain an organ, which the directors have ordered from Messrs. HENRY WILLIS & SONS, and which will be the largest in the Principality. At the end of the hall, opposite the platform, is a room 44 feet by 33 feet, which is so arranged that it can be added to the main hall for very large public meetings. The latter will thus be able to accommodate an additional 600 persons when necessary. Connected with the large hall are several retiring rooms, and also a spacious vestibule or "crush-room," which will be carefully warmed and ventilated. The grand staircase which leads to the dress balcony is in this part of the building. Near the platform there are retiring rooms for performers, as well as rooms suitable for committee meetings. The great hall will be lighted by the patent sun-burners of Messrs. STRODE & COMPANY, London, who have also supplied the special appliances for ventilating the building. The hall will be warmed by a series of hot-water pipes, which are to be arranged so as to give a uniform temperature in every part. The small hall, which is 60 feet long, 30 feet wide, and 33 feet high, will seat 600 people, and will be used for ordinary lectures, concerts, and public meetings. There are private rooms for committees at the back of this hall. The whole of the public buildings have been planned in such a manner that in the case of an exhibition or bazaar they can be made to communicate one with the other, and by this means the whole of the extensive range of rooms can be utilised. The contractor for the buildings is Mr. F. S. Lock, of Cardiff, whose tender amounted to 33,900/.

The architects, from whose designs the works are carried out, are Messrs. W. G. HABERSHON & FAWCKNER, of 38 Bloomsbury Square, Newport, and Cardiff.

## ADDITION TO HOUSE IN OSWALD ROAD, EDINBURGH.

THIS house, situated in the southern suburb of Edinburgh, commanding a magnificent view of Blackford Hill and of the Pentland Hills beyond, was built about twelve years ago. The addition shown by the illustration has been recently made, and consists on the ground-floor of improved kitchen office accommodation, on the first floor of day and night nursery, with bath-room, scullery, &c., attached, and on the upper floor of two bedrooms, dressing-room, &c.

The plans both of the original house and of the addition were prepared by Mr. R. MORHAM, architect, Edinburgh.

## ENTRANCE, TIDDINGTON HOUSE, OXON.

ONE of our illustrations is a view of the entrance façade to Tiddington House, Oxfordshire, the residence of the Rev. JOSHUA BENNETT. The house is an old building of the Georgian period, and though originally plain and unpretentious, its bold coved cornices under the eaves, its rubbed and shaped arches, moulded strings, and thick sash bars, made it of considerable interest to the admirers of the "Queen Anne" school of architecture, and led to the adoption of that style in the alterations and additions made last year, of which the work shown in our illustration formed a small part. Between the "entrance façade" and the wall of the house there is a space of some 20 feet in length, which is enclosed by a substantially-built conservatory-like erection of Queen Anne design, forming an outer hall.

The works were executed by Messrs. HOLLY & BUTLER, of Nettlebed. The brick-carving was beautifully done by the late Mr. FINLAY; and the architects were Messrs. MORRIS & STALLWOOD, of Reading.

## ARCHITECTS' CONFERENCE AT THE HEALTH EXHIBITION.

MR. EWAN CHRISTIAN, President of the Royal Institute of British Architects, took the chair on Thursday at 2 p.m., on occasion of a conference of the Royal Institute of British Architects held at the International Health Exhibition. The Chairman, in opening the conference, said that they were met together to discuss a most important subject which affected every one of us, our health, spirits, and life; and a subject eminently practical if properly treated. The Institute, of course, did not hold itself responsible for opinions which might be given by any individual speaker, and certainly not for his own opinions. This question was one not for the rich, but for the multitude, the great middle-class and the working-class. When they looked around to see what provisions had been made for the middle and working-classes, their hearts almost failed them. The rich could take care of themselves, as with the rich it was not a question of cost; but the great bulk of people had to live in houses in which there had not been that care taken that was necessary, nor was there the money even where people wished to take that care. There were builders who built thoroughly well, and there were builders who built to sell and for the immediate prospect of gain, and these were the people we had to fear. One important question of health was the choice of a site. Some people supposed that when a gravelly soil was secured for the site, that the house would be dry and that nothing more need be done. Other people had a great dread of clay. But in London we were to a great extent obliged to live on clay soil, and it was the business of the architect to consider this, and it should be the business of the builder also. A man had, however, said to him that such work was not seen, that what was not seen would not be paid for, and therefore the work would be done at a dead loss. As regarded the laying out of estates by architects, too little attention was paid to the question of aspect, and, if there was one friend we ought to welcome into our houses, it was the sun. There could not be a wholesome house in which the sun did not enter. In some sites it was, so they said, impossible to get the sunshine into the house. He did not believe it. Architects were born to contend with difficulties, and, if they could not get the sunshine in direct, they must lay traps to catch it. People when looking out for a house should always bear in mind that wise aphorism of Bacon, "He who builds on an ill site, commits himself to prison," and much the same might be said of the man who buys a bad site. There was an extraordinary difference in light under different circumstances. A really bright sky was rarely seen in Staffordshire, the same was the case in Gloucestershire and other parts of England. The exact contrary could be said of districts where the subsoil was of a dry nature. Anywhere in Norfolk you would find a bright sky owing to the subsoil, which was a beautiful dry light sand. For the health of the inmates of a house there should be a



sufficiency not only of air, but of light, especially the light of the sky, and this was generally ignored by builders who built to sell, who tried to make a pretty house by the use of obscured glass for the windows, which obscured the light of the sky and deprived the inmates of the advantages to be got from that light. If one looked at the faces of those children brought up in dark rooms and those brought up in light rooms, the faces of the one would be found pale, and of the other bright. It was said that English children could not live in India, but he had found that when light was freely admitted to them they could live there just as well as in old England. But, after all, when a house was properly built, and people went to live in it, unless common sense reigned within the house, all the architect or builder could do to make the house healthy would be spoilt by the way in which the house was treated.

Professor T. Roger Smith then read a paper on the "Construction of Houses with Regard to Sanitary Arrangements," which will be found in another part of the paper.

Mr. Fred. W. H. Hunt next read a paper on "The Sanitary Arrangements of Houses in London during the last Eighty Years." This paper will appear in next week's issue of *The Architect*.

Professor Kerr then opened a discussion, and expressed the hope that this opportunity would be embraced by architects of London to expound more particularly those principles which they, having to do with those matters professionally, understood so much better than any other section of the community. Mr. Hunt had explained to them the way in which sanitary appliances had found their way into houses to our discomfort. Time was, and not so long ago, when none were found in the house. All were outside, and there were none of the smells indicative of the presence of poison with which sanitary science had to deal, sanitary science now having enough to do in dealing with the evils which sanitary science had created. Underground we had created an immense number of filthy channels in which poison was generated every moment. Every room in the house was connected with this underground system, and the poison generated there admitted into them. Professor Kerr then read some propositions which he had formulated as his contribution to the solution of the difficulty, which may be summarised as follows:—that atmospheric air had for its principal function the universal work of cleansing; that decomposition in the open air was innocuous; that houses in this country were closed boxes, to the absolute exclusion of the outer air; that they were filled with vapours from the ground beneath; that the houses were in connection with this great system of sewers and poison; that the communications from the house to the underground system were really communications to the house again; that cleansing air might find its way into the house, but that the sewer gas forced its way in with still greater energy. There were three ways of meeting these evils. One plan, impossible to carry out, would be to do without these appliances altogether. A second plan, he was sorry to say, was to direct their ingenuity to improving and increasing the efficacy of these already too complicated appliances. In the third place was a plan that he himself had thought out, to form a vertical compartment or annexe, open at both ends, and running from top to bottom of the house, to contain all water-closets, sculleries, &c., &c., with shaft for pipes of water and gas service, &c., the annexe to communicate only with the staircase. In connection, also, a subway under the basement, with manhole at each end, to contain water and gas mains, &c.

Sir H. Ackland, F.R.S., said he thought he never heard anything more opportune or instructive than the papers they had just heard. The description given by Mr. Hunt of this very curious subject in the world's history in our time, was well worthy of their attention in a most serious way. He said it was a curious subject, because, as Professor Smith reminded them, a good deal of these matters were better understood a couple of thousand years ago than now, and some of the works of the Romans in Italy, Rome, and in the neighbourhood of Carthage, especially the water-supply, were worthy of the utmost admiration of the engineers of the present day, though constructed with unscientific knowledge. Some forty years ago, when they had directed attention to these matters, the public had mistaken their action, and said that they did not believe doctors were going to do anything to try and abate diseases. They could not understand that they wished to stop the ravages of disease. Therefore he was glad to see that architects, chemists, doctors, &c., having put pedantry aside were taking steps to popularise the subject, and let the public know the absolute necessity of carrying out this work, and that architects were determined to set these matters right.

Mr. Lewis Angell, C.E., disagreed with Professor Kerr's remarks, and said that the evils complained of were not due to sanitary science but to the want of proper sanitary science. No wonder houses were foul when people came to see the condition of the drains. These matters were not overlooked by architects; they were left entirely to the working labourer.

The discussion closed with some remarks from Mr. W. C. Street.

At 4 p.m. the conference was resumed, and a paper read by Mr. S. Flint Clarkson on "Drainage under Dwellings," which will be given next week.

A discussion was opened by Mr. Thomas Worthington and continued by other speakers, and the proceedings were adjourned till Friday.

### THE BLENHEIM PICTURES.

A DEPUTATION waited on the Chancellor of the Exchequer to urge the importance of the Government purchasing some of the pictures from the Blenheim collection. The Duke of Westminster headed the deputation, and stated that the Duke of Marlborough had offered to sell to the nation the *Madonna and Child, with Saints*, by Raphael, and the equestrian portrait of Charles the First, by Vandyck, for 160,000 guineas. Sir Frederick Leighton said it would be a great loss to the nation if the National Gallery did not acquire the principal Rubenses as well as the Raphael and Vandyck. Mr. Agnew supported the view of Sir F. Leighton. It was stated, in answer to the Chancellor of the Exchequer, that 24,000*l.* was the highest price ever paid for a picture. Mr. Childers, without expressing an opinion, promised that the views of the deputation should be laid before the members of the Cabinet. It is now said that the Government will not buy the pictures.

### THE EXHIBITION AT PESTH.

THE Secretary of State for Foreign Affairs has received a note from the Austro-Hungarian Ambassador respecting the facilities which will be granted to goods sent to the Exhibition which is to be held at Buda-Pesth in 1885. The Austrian and the Hungarian railway companies, the Danube Steam Navigation Company, and the Advia Navigation Company will carry such goods at reduced rates. The Austro-Hungarian Lloyd has also made certain alterations in its rates for the same goods, and various railway companies in Germany, Holland, France, and Russia have agreed, under certain conditions, to carry back, gratis, any goods not sold at the close of the Exhibition. The Finance Ministry of Hungary has also granted various Customs facilities for foreign goods destined for the Exhibition. The Governments of Germany, Holland, Italy, Belgium, France, and the United States of North America have consented to re-admit free of duty goods which are brought back unsold from the Exhibition in question. Further and more detailed information can be obtained at the Austro-Hungarian Embassy, Belgrave Square.

### MANCHESTER CATHEDRAL.

A MEETING of parishioners has been held in Manchester to consider the advisability of removing the south gallery in the cathedral. The Dean, who presided, said that regarded as a diminution of the accommodation in the church, he should regret the removal of the gallery, unless he were persuaded there would be a corresponding addition to the sittings in some other part of the church. That was apparently in the contemplation of the architect and the churchwardens, who believed they could provide accommodation in another part which would quite replace the seats lost by the proposed removal of the south gallery. The strongest reason in favour of the removal of the gallery was that it was part of the scheme to take back into the church what was now called the cathedral library. He was on that ground entirely in favour of the removal of the gallery. That would do much towards replacing the seats lost in the gallery; therefore upon the whole his mind inclined towards the removal of the gallery. He could not avoid expressing his great regret that the opportunity was not taken when an extension was first suggested for extending the north aisle further westwards, leaving it perhaps for a future generation to extend the whole church westward. After some discussion it was resolved to apply for a faculty. Two books on the history and architecture of the cathedral are about to be published. One by the Rev. Ernest F. Letts, M.A., precentor and minor canon, aims at being not only an exhaustive account of the persons and incidents connected with the church from the very earliest times to the present day, but a careful architectural summary of its construction. In this latter portion of the work Mr. Letts will be assisted by Mr. John Crowther, the present architect of the cathedral. In addition to a chronicle of many incidents of local history, the work will contain copies of the early deeds and charters, reproduced in *fac-simile* by photozincography. The book will also abound with illustrations, many of them in colours, depicting the heraldry, brasses, tombs, monuments, stained glass, &c. The architectural drawings will all be photographed from the originals, as well as numerous maps, plans, and other matter. An effort will be made to include every object of interest connected with the church and its ancient chapels. The book will be published in four large quarto volumes, each volume containing a distinct period. The first volume, which is expected to appear about next Christmas, will bring the history of the collegiate church down to the granting of the first charter, in the years 1421-22. Messrs. Abel Heywood & Co., of Manchester,



are the publishers. The other work, which will probably appear earlier than the elaborate monograph by Canon Letts, is "An Historical Account and Illustrated Description of the Cathedral Church of Manchester," being the essay submitted to the council of the Manchester Society of Architects for a prize given by the society during the session 1883 by Mr. T. Locke Worthington. In this an historical sketch is first given, in which the origin and formation of the present plan of the main body of the church are explained. Reference is made to the architecture, position, and form of the old parish church prior to the foundation of the collegiate church in 1422. The origin and history of the various chantries is then given, thereby explaining the addition of the outer aisles and chapels. A description of the interior follows, including particulars of the monuments, brasses, and stained glass. After this a description of the tower is given, and an external survey of the church, and, finally, a dated record and notes on the various modern alterations and restorations.

### BIRMINGHAM ARCHITECTURAL ASSOCIATION.

THE annual dinner in connection with the Birmingham Architectural Association took place on the 4th inst., at the Grand Hotel, Birmingham. Mr. J. J. Bateman presided, and there were also present Messrs. Franklin Cross (hon. secretary), J. Cotton, V. Scruton, E. Wood, J. T. Eayres, D. Dickinson, W. H. Kendrick, F. G. Hughes, J. W. Tonks, J. Pratt, &c. In proposing "The Association," the President said he regretted that the young members of the profession had not received the assistance they ought to have received from their seniors in Birmingham. The success of the association was marked. During the past year it had greatly improved, financially and numerically, and he trusted the heads of offices would do their best to induce students to join the association. The President explained at length the results of the last triennial conference in London. At the present time he thought there was an opening for the junior members to make a departure in architectural design. In the past there had always been a leading spirit joining the different styles which the profession followed, but such was not the case at the present time.

Mr. Cross (hon. secretary) replied to the toast, stating that the association was flourishing, but urging upon members of the profession to do their utmost to support it in the future.

### SANITARY FURNITURE.

A LECTURE on house furniture, considered in respect to sanitation, was delivered by Mr. Robert W. Edis, F.S.A., in the Conference Hall at the Health Exhibition on Monday last. Mr. Edis, at the outset, remarked that, having been engaged for some time as one of the jurors in connection with the exhibition, he had been astonished to find that some of his colleagues disagreed with his views, and therefore it was with the utmost diffidence that he laid before them what he considered were the right considerations as to health in the house allied with artistic and decorative principles. When pure air, pure water and proper drainage had been secured, many people considered they had done everything necessary, but Mr. Edis pointed out that as regarded purity of air it must be borne in mind that the air of our rooms was not only influenced by impure smells, but by the objects of furniture, &c., placed in those rooms. There were persons, it struck him, to whom the sense of sight was nothing. They visited different countries, and admired the grand scenery they passed through, and showed that they did possess a sense of what was beautiful in nature and in art. But in minor things the sense of sight seemed almost neglected. No one there present, he believed, would eat food badly cooked, or permit of smells pervading the house, but they allowed of wall papers, carpets, hangings, &c., irrespective of propriety of design, fitness for the purpose, &c. Take the floor coverings of a room. We were content to cover the whole of a floor with a thick carpet, which was only taken up once or at most twice a year, and then revealed an amount of filth ghastly to look at. Windows were hung with Venetian blinds, on which dust and dirt accumulated. This dust, dirt, and filth must contribute a certain stuffiness to the rooms. Windows and doors of bedrooms were closely shut, and the inmates breathed an air which was absolutely deleterious, and which made the hours of sleep restless and uninvigorating. If there were any truth at all that illness was brought about by impure air, that impure rooms brought about lassitude and illness and all that was objectionable in life, he took it that these things ought, from a sanitarian point of view, to be avoided. At any rate, if it was hopeless to get rid of them altogether, they should be minimised as far as could be. Houses should be made as good and as clean as possible inside, and, if our houses were cared for, the towns would look after themselves. Mr. Edis pointed out that care should be taken to avoid making receptacles for dust in our rooms—cumbrous furniture, as wardrobes seven feet high, on the top of which dust and dirt lodged out of reach of the servant; heavy hangings, flock wall-papers, &c. The designs of papers and hangings also were noticed. People should not be annoyed or worried on waking up in a room

by seeing the absurd repetitions of endless bunches of flowers which obtruded themselves on our notice and set one to count them up, or the conventional cherubs tied together with wreaths of roses. One wanted the cherubs to shut their mouths or to open them, or anything so long as they would only get out of the way. Representation of motion, such as the design of birds in flight—only they did not move—should be avoided. All this must in some way affect the health of the inmates. From an æsthetic point of view, if he understood the æsthetes right, he must say that he had nothing in common with them, and, if they were at all answerable for these things, let them have nothing to do with æsthetes or æsthetic furniture, &c. There was one exhibit, however, of bedroom and other furniture, Mr. Edis said, which practically carried out his own views, and his audience would be able to judge for themselves whether it was worth looking at. Mr. Edis, speaking of town houses, did not, in case of a family growing up, advocate the putting children in one room, or nursery, and the ranging a little row of beds together for them at night. As they grew up, he thought each should have their separate room arranged as sitting-room and bedroom, and this could be done by cutting off part of the room by a curtain or some such expedient. In regard of floors, he recommended staining or painting them, and stopping up every crevice and crack, and the use of mats instead of carpets. The room could then be kept perfectly clean with little trouble. A sickly odour was sometimes noticed in rooms, which could not be accounted for. It arose from the size, which was in a state of putrefaction. Wherever this was the case, he recommended that the paper should at once be taken down. Mr. Edis then devoted some remarks to the necessity of securing proper ventilation, especially in sleeping rooms, the practice being almost universal to close up a bedroom hermetically so to speak. He regretted that the time at his disposal was so short, and that his subject was so large, and he felt that in the short time he had addressed them he had barely been able to touch on what he would have liked to have said.

### IRON ROOFS.\*

IF the development of iron roofs could be fully followed out in a book, we should have an almost complete treatise on practical statics. That development is partly owing to theoretical investigations, but mainly to the daring which comes from experience. The first great roof was one in the old Lime Street Station in Liverpool, which was designed and constructed in 1850 by the late Richard Turner. It was so much of a novelty that Mr. Joseph Locke, who was one of the wisest of railway engineers, was opposed to its erection, as he was doubtful about the security of the structure. The span was 153 feet 6 inches, and the principals were 21 feet 6 inches apart. When the station was enlarged it was found practicable to construct a roof having an average span of 212 feet, with principals 30 feet apart. The roof of the St. Pancras Station has a clear span of 240 feet, and the St. Enoch Station is covered by a roof 198 feet span, which is independent of any transverse ties. If railway managers will continue to believe in unimpeded stations—which, however, is not a certainty—it is possible that roofs of greater spans will be constructed, and that one of double the width of the original Lime Street roof may be seen in this country. We may even see a roof that will rival Colonel Emy's projected timber roof, which was to be 328 feet wide. Turner knew little of theory, and it may be doubted if he ever used any formula except some rule-of-thumb calculation which he had worked out for himself; and in many later roofs his example has been followed. No one who knows anything of the history of engineering structures will therefore object to the absence of an abstruse mathematical introduction from Mr. Walmisley's book. His object, as he tells us, "has not been to deal with the methods adopted for the calculation of strains, which have been already well considered by many practical authors in standard works, but to provide a record of the style of design adopted in some of the best-known roofs that have been erected." It must be allowed that so ample a record has not hitherto appeared. Mr. Walmisley has been fortunate in obtaining the privilege to publish the working drawings of about thirty roofs, which are types of different systems. His plates are apparently reproductions on a reduced scale of tracings taken from the originals, and have therefore a style about them that is absent from engravers' copies. The latter might be more pleasing in appearance, but would hardly be equally convincing. A student will, however, find it to be an advantage to colour the sections, and some of the plates will be clearer if a wash of colour is used on other parts as well. The lining is careful, the scales correspond with the figures whenever we have tested them, and generally dimensions are marked on the details. Drawings like those in Mr. Walmisley's book are jealously guarded, and are rarely seen outside the designers' offices. Their publication will be a boon to many. There is a limit to the forms in which plates, bars, and angles can be used, and it is no exaggeration to say that, as this

\* *Iron Roofs, Examples of Design.* Description illustrated with Working Drawings. By Arthur T. Walmisley, C.E. E. & F. N. Spon.



volume shows them all, it thus becomes of more help than the title suggests, and is an exemplification of wrought-iron construction.

The roofs are taken, with one exception, from existing structures in Great Britain, and nearly all belong to railway stations. London supplies those from St. Pancras, Charing Cross, Cannon Street, Blackfriars, Broad Street, King's Cross, London Bridge, Liverpool Street, Earl's Court, and Victoria (two) stations, and the Albert Hall, Aquarium, and Alexandra Palace roofs. The roofs of the four principal stations in Glasgow are given, and Manchester, Liverpool, Leeds, Dublin, Carlisle, Exeter, Bristol, Penzance, Middlesbrough, York, and Swansea are represented. The spans are mainly large, and it would be an advantage if a companion volume dealing with smaller spans were also published. The whole of the illustrations have been reproduced by Messrs. Sprague & Co., and among them are ink-photo views of stations and works in course of construction, which give a better notion of the buildings than is to be derived from drawings.

All roofs may be divided into two classes, viz. (1) those which form triangular trusses, and (2) arched trusses, or, according to Rankine, rafters and arched ribs. The earlier roofs were of the former class, the majority of the more modern roofs are of the latter. The trusses may be braced in an almost infinite variety of ways; Mr. Walmisley assumes that in practice twelve kinds are used—of which five are curved. As examples of the triangular truss have segmental rafters, the proportion of the curves is in practice much greater. The advantage of curved roofs is the width that is practicable. But attempts have been made to secure that end by other arrangements. Thus, for example, at the new Central Station, Glasgow, there are flat girders which are 213 feet 6 inches in length, with a series of small ridge and furrow roofs over them. This roof is, however, hardly so effective in appearance as that in the St. Enoch Station. The main transverse girders of the great Carlisle roof are also flat, the ridge and furrow covering running parallel with them. In this case, however, so much use has been made of circular bracing, that the impression made on a spectator who does not analyse the construction is the preponderance of curves. The roof is simple in arrangement, but to the majority of travellers it is one of the most intricate. The cost, including columns, was only 12*l.* a square. It is glazed on Rendle's system. Two excellent examples in the stations on the Metropolitan District Railway, at Ealing and Earl's Court, also denote that the old-fashioned triangular truss, which is so nearly related to construction in wood, can still be utilised with advantage. But, on the whole, the grandest result is obtainable from curved lines on the principals. In buildings this is especially the case. The Sydenham palace transcends the Hyde Park glass-house in appearance owing to the adoption of arched ribs, and the capital roof of the Winter Palace which formerly stood in Dublin owed much of its success to that cause. The latter was designed by Mr. R. M. Ordish, who appears to be almost the only engineer in England who is capable of imparting an architectural spirit to his ironwork. Indeed, it must be said that the attempts at ornamentation which are recorded in some of Mr. Walmisley's plates are depressing, and suggest how much has yet to be done to bring taste home to the English mind. It is, however, the constructive details that render Mr. Walmisley's book invaluable, and he deserves much credit from the profession for producing so substantial an addition to the Engineers' Library.

### THE ARCHÆOLOGICAL CONGRESS.

THE annual summer congress of the Royal Archæological Institute will be held this year at Newcastle-on-Tyne, during the week from Tuesday, August 5, to Wednesday, August 13 inclusive, under the presidency of the Duke of Northumberland. Tuesday, the 5th, will be devoted to an inspection of the castle and cathedral of Newcastle, after the public reception of the society by the mayor and corporation at the inaugural meeting. On Wednesday the members will visit Warkworth and Alnwick Castles, which will be described by Mr. Clark. On Thursday they will go by train to Beal, from which place Lindisfarne and Holy Island with its church and castle will be visited. Friday will be devoted to a visit by rail to Belford and to Bamburgh Castle. On Saturday the annual meeting of the society will be held. At its conclusion the members will proceed to Jarrow, Monkwearmouth, and, by steamer down the river, to Tynemouth. On Sunday a special service will be held in the cathedral, when it is expected that the Bishop of Newcastle, Dr. Wilberforce, will preach. Monday will be devoted to an inspection of sundry parts of the Roman wall, and to a visit to Chesters, where the Roman remains will be explained by the Rev. J. C. Bruce. On Tuesday the archæologists will go by train to Corbridge, from which they will visit Aydon Castle, Bywell, and Prudhoe Castle. Wednesday will be occupied by a visit to Durham, where the cathedral and castle, and probably Finchall Priory, will be inspected. There will be a meeting on the evening of Tuesday, at which papers will be read, and probably also at least one *conversazione*. A temporary local museum, under Mr. R.

Blair, F.S.A., will be open during the week in the Black Gate, where also the sectional meetings will be held. Among those who have sent their names as patrons of the congress are the Duke of Portland, Lords Ravensworth and Scarborough, the Bishops of Durham, Carlisle, Newcastle, and Hexham, Sir Charles Trevelyan, Sir Joseph Pease, Sir Edward Blackett, Sir Matthew White Ridley, Sir Walter James, &c.

### THE CONSTRUCTION OF HOUSES WITH REGARD TO SANITARY ARRANGEMENTS.\*

BY PROFESSOR T. ROGER SMITH.

THE health of man is greatly influenced by his food, dress, climate, occupations, and dwelling. It is with the conditions affecting the last of these, as they occur in our own country, that we are at present concerned. There are few subjects which are really new, and certainly human dwellings must be nearly as old as the human race. It seems, therefore, reasonable in approaching a consideration of them to cast a glance backwards, and try to see how our forefathers have been housed.

The earliest habitations of which traces remain in England can have afforded little more than a bare shelter from the storm, and some degree of warmth. Yet even those primitive huts, the remains of which are found on Dartmoor and elsewhere, must at least have protected their inmates against the worst vicissitudes of the fickle English climate. It was a fortunate circumstance for ancient Britain that a Roman occupation took place. At such a spot as Silchester you will see the remains of a town regularly planned, and of many buildings of some solidity, decency, and order. What existed at Silchester was repeated in various forms throughout our country, as for example at Colchester, Dorchester, Uriconium. Good methods of building and an orderly mode of laying out dwellings were thus introduced, and to a certain extent took root in the soil.

Every glimpse that we can get of the mode of life of the Saxons, when they became able to attend to the arts of peace, seems to show a largeness of ideas, and an orderly spirit, no doubt greatly due to these Roman traditions and remains. We have proofs, for example, that the Confessor's Monastery at Westminster was planned on the most liberal scale, and very carefully constructed, and so probably were the best Saxon dwelling-houses. The Norman Conquest covered our land with castles and keeps, in the ruins of which good internal arrangements are still to be detected. Such a structure, for example, as the White Tower of the Tower of London, when not overcrowded, must have been an excellent residence, before it became a prison. It is probable, however, that ordinary dwelling-houses, small and large, deteriorated at this time in consequence of the occupation of the land by strangers.

Of English residences built during the Middle Ages, remains have come down to us only from the most strongly built—chiefly the castles. But from the best preserved and most complete of these, as for example Conway Castle, we may learn that the elementary principles of sanitation were understood, and pains and care taken to secure comfort and even luxury, so far as they can be enjoyed within the restricted boundaries of a fortified dwelling; while the semi-fortified houses, of which a few remain in tolerable preservation, such as Penshurst, Ightham, Warwick Castle, and Haddon Hall, were many of them so complete that they continue habitable even by this fastidious generation.

Monastic buildings, from a time long before the Conquest down to the Reformation, afforded a series of admirably well-planned and well-built dwellings for the residence in common of a large number of inmates, the general idea of which survives in the colleges of Oxford and Cambridge. The neighbouring detached but dependent buildings, such as the abbot's house, the mill, and the grange belonging to a monastery, were each and all of them good specimens of small dwelling-houses. They were, however, in all probability, far better than the houses which surrounded them, if we may credit a curious but by no means flattering account of the ordinary English dwelling-house at the close of the Middle Ages which has been lately made public in Brewer's "Henry VIII.," and from which I cannot resist the temptation to quote a few lines. It is from the pen of the most accomplished scholar and cleverest man of letters of the time.

Erasmus, writing to Wolsey's physician on the dwelling-houses of England in the early years of the reign of Henry VIII., says:—"First of all, Englishmen never consider the aspect of their doors and windows; next, their chambers are built in such a way as to admit of no ventilation. Then a great part of the walls of the house is occupied with glass casements, which admit light but exclude the air, and yet they let in the draught through holes and corners. The floors are in general laid with white clay and are covered with rushes, occasionally removed, but so imperfectly that the bottom layer is left undisturbed sometimes for twenty years,

\* A paper read at the conference of the Royal Institute of British Architects at the Health Exhibition on Thursday.



harbouring abominations not to be mentioned. I am confident the island would be much more salubrious if the use of rushes were abandoned, and if the rooms were to be built in such a way as to be exposed to the sky on two or three sides; and all the windows so built as to be opened or closed at once, and so completely closed as not to admit the foul air through chinks, for as it is beneficial to health to admit the air, so is it equally beneficial at times to exclude it."

After the time of the confiscation of Church property, under Henry VIII., a large amount of house-building on a great scale occurred. The vast Elizabethan and Jacobean mansions, of which we are justly proud; and the smaller manor houses, farmhouses, and town houses which were erected at that period, and of which many specimens remain, show a great advance in the art of architecture, and are even now delightful residences.

It is very doubtful whether the influence of Italian and French examples in the seventeenth and eighteenth centuries was not on the whole disadvantageous. Certainly some of the Palladian mansions of about a hundred years ago are less carefully disposed for health, decency, and comfort than the Elizabethan ones which preceded them. The story of what followed, at any rate in the metropolis, will be told us in the paper set down for reading immediately after this, so here my retrospect may well close.

We now live in the era of the steam engine and the railway. An unparalleled revolution, within the lifetime of many of us here present, has changed the social aspect of the country, and has altered the conditions under which our dwelling-houses, especially those in our towns, are built to a remarkable extent. A teeming population of operatives, constantly on the increase, has to be housed somehow; and an enormous number of persons in the middle and higher classes desire, and are able to afford themselves, accommodation of a superior, and in many cases a luxurious, kind. A vast section of our people live in institutions of some sort. The inhabitants of our hospitals, asylums, prisons, work-houses, schools, and almshouses, if all reckoned up, would amount to an astonishing total, and are on the whole well cared for; but scattered over the face of the land our agricultural and mining populations, less affected than the inhabitants of towns by the recent changes, have in many cases to occupy dwellings identical with, or very similar to those of three or four or more generations back.

It is with this state of things that we have to do at the present day. If we try to form an estimate of our actual condition, it will soon become clear that, with our present habits of life, the influence of the dwelling on the health of its inmates is very great. I am inclined to believe that it is much greater than at any previous period. Indoor occupations, for men, are far more common than they used to be, and probably though women have to a large extent lived in the house for several centuries they now do so more than ever. The habits of luxury which increasing wealth brings with it all tend to weaken, or at any rate to refine, our physical organisations, and so render us more and more susceptible to the influences of the material circumstances which immediately surround us. This being the case, it becomes increasingly important that every means should be taken to render dwelling-houses thoroughly healthy.

In one respect the habits of modern life, and the plentiful supply of one of its first necessities, have introduced a very serious danger, the nature and extent of which are happily at last tolerably well known, so that preventive measures can be applied. I allude to the use of water as the vehicle for removing refuse matter from our houses. So many persons imagine that sanitation only means drainage, that I should have liked to pass by the subject entirely, if only to show that other functions of a dwelling as well as the disposal of its sewage are of importance to health. It seemed, however, impossible to avoid this allusion to it. We had unconsciously exposed ourselves to the poison of sewer-gas, and we now find that we must fight tooth and nail to put an end to that danger. Much else is indeed involved in the conditions of healthy dwellings besides drainage, and to much of this the attention of this Conference will be directed by the papers about to be read and discussed.

Good disposition of the houses in a town, a street, or even a small group, so as to secure the best aspects and the largest amount of sunshine, air, and clear space, is a matter of primary importance, the more so because pecuniary interests often appear adverse to the best sanitary conditions. Good disposition of the plan of the dwelling itself is of the utmost importance from a sanitary point of view; but its value is, I think, more recognised by the public, and even by speculative builders, than the importance of healthy laying out of sites for houses.

Adequate ventilation, including methods for the removal of vitiated air from gas burnt in our dwellings; sufficient means of warming; ample windows, properly placed to light the whole of each room; sound construction, so as not only to make the dwelling desirable, but to protect the inmates from the effect of inclement weather, especially of cold and of damp, those greatest enemies to health and comfort in this country; protection from noxious compounds in the paint or paperhangings used for the dwelling; complete systems of drainage and of ventilation for the drains; and an ample supply of pure water, hot and cold, are

among the obvious features of house sanitation. Other less obvious matters remain. The influence of monotony, of insufficient light, of dulness, is known and felt by us all as depressing, or, in other words, as unhealthy; and the designer of a dwelling which is to be fit to be a home should have in his mind the necessity for its being pleasant quite as distinctly as the more obvious questions of where to put his drains, or cisterns, or stoves.

I propose to conclude by directing your attention for a moment to a consideration with regard to which something may be said, without, I hope, anticipating what we are to hear from others. I refer to the share which the architect may properly claim in the duty and privilege of promoting public health by improving the construction of dwellings. In other words, I propose to ask how far all this is an architect's question.

It is not sufficiently known to the general public, but well known to ourselves, that the actual direct control possessed by architects over the majority of the dwelling-houses built in England is extremely small. When Prince Albert wanted to improve Buckingham Palace he sent for Thomas Cubitt, builder, and contrived it with him without professional advice; and this is the kind of thing which has been done by other persons less highly placed since then. In ninety-nine cases out of a hundred, the dweller in or near one of our towns, especially this metropolis, never dreams of building his own house, and looks out for one ready built by a speculator, and puts up with untold inconveniences, and even dangers, from its many defects. But notwithstanding all this, the opportunities which we possess of influencing the buildings of this country are very great; they are such as no other body of men enjoys. We can do a great deal to secure that the homes of England are healthy; and if we fail to do all that we can, we shall be failing in a great public duty.

In the first place, I think it may be safely affirmed that whatever may be the case in towns, the country house of a person of influence and importance is now never built without an architect. From parsonage houses upwards we have the designing and superintendence of all the houses of the clergy in their parishes, and the rich when they are living on the estates. These, then, we can make as fit to promote health and to avert disease as we are able, and they ought to be as healthy as any buildings can be. Collectively they provide for a vast number of residents, including a great proportion of the most important men and women of the country; and, in addition to this, they are conspicuous as models. The dwellings of the highly-placed should be perfect, not only for their own sake, but because such buildings are sure to be imitated, and their owners are most likely to promote sanitation when their own dwellings teach them what it means. What persons of power and influence do, others in lower positions in life will endeavour also to do, and what they recommend will be likely to be followed. In not a few cases such persons are themselves builders of labourers' dwellings, while among them are some whose estates situated in London are each of them equal to a populous city, within which the owner of the soil has it in his power to prescribe any conditions he pleases to the persons who build or rebuild houses.

Next perhaps in importance from our present point of view are our countless residential institutions, if that term may be used to denote public buildings where persons live temporarily or otherwise. Every college, school, hospital, workhouse, &c., has its architect, and we have even seen military barracks erected by civil architects. The very purpose of these buildings renders attention to their sanitation one of the most positive duties of the architect.

At the other end of the scale the very numerous model dwellings erected in London and other cities for the urban labouring population, and not a few agricultural labourers' dwellings, are almost always put into the hands of architects, and are buildings in which sanitary excellence is often the only good quality that the architect has an opportunity to impart. Between these two extremes lie the numerous dwellings of the middle class, which, as has been said, are far less under an architect's control than the buildings above or below them; yet it must not be forgotten that from time to time an individual house is commissioned, and ought to become a model. Some of the most intelligent of the building speculators are occasionally wise enough to employ an architect of skill and repute and to build from his designs, though hardly perhaps under his direction. In all such cases the architect should be sure that not only the ordinary appliances of sanitation, but, as far as possible, all the finer elements of a healthy dwelling, are present in his design, and should bargain that they are retained. Even in the case of the vast melancholy multitude of ordinary dwellings built by speculators on leasehold ground, there is one period in their history when an architect exercises some considerable control, and when, if he is thoroughly familiar with what makes houses healthy, he may prescribe and enforce building conditions that shall greatly benefit future occupiers. But nothing will effect a great improvement in these dwellings except a radical change in public opinion and feeling on the subject, and it may be hoped that such a Health Exhibition as this will tend to foster such an instructed public opinion.

It will, I trust, be conceded that the health of the community is one of the most important elements of its well-doing, and further that the dwelling may very largely impair or improve that health



according as it is bad or good. I trust I have shown sufficient reasons for our recognising that this is pre-eminently an architect's question, and, if that be admitted to be the case, it will hardly be necessary for me to bespeak your best attention to those of our professional brethren who are to address us on some of the details of the subject, and ask you to contribute to its elucidation by joining with spirit in the discussions.

### YORKSHIRE CHURCHES.

THE members of Lincoln Diocesan and Yorkshire Architectural Societies on the 3rd and 4th inst. visited the churches in Hull and district. Service was held in Holy Trinity Church on the morning of Thursday, after which the architectural features of the fabric were described by the Rev. Canon McCormick. The old Hull Grammar School was also visited. The societies were received at the Town Hall shortly before ten o'clock by the Mayor (Dr. Rollit), and carriages started thence to Hedon, Preston, Keyingham, Ottringham, Patrington, and Halsham. Alderman Park, of Hedon, gave a very interesting description of the exterior and interior of the parish church of Hedon, which town, it may be stated, is an old Parliamentary borough, and was disfranchised by the Reform Bill of 1832. The Patrington parish church was described by Mr. F. S. Brodrick, architect, of Hull. Ottringham Church was described by Mr. Brodrick, from a paper prepared by Mr. Fowler, architect, Hull. This church dates its origin from the fifteenth century. The Bishop of Nottingham made some critical remarks on the old Norman church of Halsham, the principal attraction at which was a freedstool or sanctuary chair, which the party inspected with great interest, as it had hitherto been believed that there were only two in existence in England, viz., those at Beverley and Hexam. Here there is also a recumbent statue in armour, supposed to represent one of the Constables of Burton Constable. The spire at Keyingham Church is of solid stone. Other places of interest were visited during the afternoon.

The proceedings on the second day began with a visit to St. Mary's Church, Hull, which was described by the Rev. Canon Scott, the late Vicar, but now of Leeds. A special train conveyed the members to Beverley, where the Minster was visited. A good paper was read by Mr. F. S. Brodrick, who afterwards conducted the party round the Minster. Mr. W. Stephenson, of Beverley, described the well, and some objects of archaeological interest found in it. The church of St. Mary and the North Bar were also inspected. The party next went by train to Bridlington, where the Priory church of St. Mary was described by Mr. J. Fowler. The Bayle gate was likewise inspected. Burton Agnes was then visited, where, by the permission of Sir H. S. Boynton, Bart., the party were shown over the hall. The return to Hull was made in the evening, and a public meeting was held at the Town Hall at 8.15. The programme in the evening included the reading of a paper by Precentor Venables, on "St. John of Beverley: his Miracles and his Ministry;" and one by Alderman Symons, M.R.I.A., on "Hull in the Olden Times."

### THE WINCHESTER CELEBRATION.

THE celebration of the seven-hundredth anniversary of the foundation of the mayoralty has been held in Winchester, and with great spirit. There was a special service in the cathedral, which was attended by a great many visitors, representing the corporations of London and other towns.

The Dean, in his address, spoke of the antiquity of the cathedral, and said that forty years ago they might have celebrated the twelve-hundredth anniversary of the founding of that church, large portions of which of the most imposing and splendid character were standing a hundred years before the day they had met to celebrate. Remarking upon the change in the character of English architecture, which, as exemplified in this cathedral, began about the time the charter for the mayor and corporation was granted, the new style shaking itself free from the Norman influence, he observed, that in a similar manner the civic mayoralties of England, of which that of Winchester was the first, became places in which the tyranny of the Norman conquerors could be withstood and overcome. The great grievance under which the English people in the twelfth century suffered was not the oppression of their kings, but of the Norman feudal nobility. Those early cities were fortresses in which the people of the land could take refuge in those terrible times, and they received the greatest encouragement and support from those who, quite as much as the native portion of the English people, hated the Norman masters of the kingdom. This, he ventured to say, was why the great King Henry II. set the new movement on foot by this first charter. They were there to celebrate the birthday of the unifying act by which the group of all but independent societies or guilds in an English city hitherto presided over by a portreeve or sheriff, were brought into one great city under a mayor and corporation. Henry II., as it had been suggested, wishing to signalise the birth of his German grandson, who was born in Winchester, created an epoch in English muni-

cipal history. He was half a foreigner, his possessions in France were larger even than those of the Kings of France, and it was not wonderful that he should look there for some means whereby he might strengthen the good city of Winchester, and in the towns of France he would see that they had lately introduced an officer who was called *Le Marre de la Ville*, and who was, as the name indicated, the head man of the town. Thus we had arrived at a true municipal constitution, and in the first mayor of Winchester we found the first example of a civil power able to withstand all bad government, tyranny, and oppression whatsoever. Tracing the corresponding growth of municipal institutions in Germany in the towns of the Hanseatic League, he remarked with regret upon signs to be found, as in Lubeck, of the bitterness of the struggle which took place between the municipal and clerical powers for supremacy. Referring to customs which formerly prevailed in Winchester when the great fair of St. Giles was held, and the bishop of the diocese for sixteen days held the keys of the city and placed his own officers at the gates to take toll of all comers, he observed that he was not aware, however, that there had ever been any serious differences between the bishops and the people of the city.

The commemoration committee subsequently entertained their visitors at a luncheon in the County Hall.

Mr. Melville Portal, to whose exertions are mainly due the restoration of the ancient castle hall, or great banqueting-hall of the Royal Palace, dating from the time of Henry III., where the luncheon was served, proposed the toast of "Prosperity to the City of Winchester." He said that no one could look around that noble hall without his heart being stirred within him. Every stone in the building was bristling with memories of the past, and had a history connected with the greatest events of this great kingdom, and who could look round on that occasion without feeling moved at the sight? That great multitude had met together determined to connect the great past with the present—to commemorate an event of seven hundred years ago, and their presence seemed to him a most interesting instance of the great congruity of the country. Sitting at that table imagination might almost cause them to listen for the re-echo of the voices which they knew caused the hall to ring in times past, where such men made their mark as Wykeham, Waynflete, Gardiner, and Fox, Raleigh and Walsingham, Coke and Jeffries, Andrews, and many others, who in their several ways had made an impression upon the country, from which every one present, more or less, benefited. They were met again in that great hall, after it had been empty for centuries—not met as their ancestors did to scheme plans of war, they were not even met for the purposes of State, but peacefully to commemorate the success of that institution which their ancestors saw in its cradle, and which they had, by the blessing of Providence, lived to see in its maturity on its seven-hundredth birthday. There had been banquets before in that hall—banquets of a more sumptuous character probably, notably that given by the Fifth Henry to the ambassadors of Charles of France, and by Henry VIII. to the Emperor Charles of Germany and Spain. It was possible that had Henry VII. been there that day he might not have preferred the band the mayor had provided for their entertainment to the miracle plays. Those banquets may all have been grander and more gorgeous, but there never was an occasion when a banquet was more worthily and peacefully held than at the present, for they were met to celebrate the anniversary of a great institution, of the greatest importance not only to the city but the kingdom at large—an institution far older than the House of Commons itself, and which was the origin of self-government in this country, which was the nursery of that manliness and independence of character which was the characteristic of the English people.

The Mayor of Winchester thanked Mr. Melville Portal and the Right Hon. G. Sclater Booth for the use of that hall, without which it would have been almost impossible to have celebrated the event. That hall was once the property of the citizens. In 1656 the Corporation purchased the hall and its surroundings for 260*l.*, but in 1682 the citizens showed their great loyalty by giving it back to the king for nothing at all. He thanked the committee for the assistance they had rendered him, and particularly to Mr. H. Wyeth and Mr. White. He also thanked the mayors for their attendance, and hoped Mr. Portal's history of that hall would be published concurrently with the new work in connection with the city of Winchester, and if that celebration produced only those two works, and led to the recovery of their ancient charters, it would not have been held in vain.

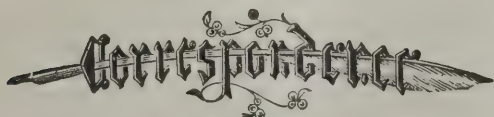
In the evening there was a torch-light procession, in which a series of *tableaux vivants* were carried through the principal streets. The histories selected were Henry II. granting a charter to Winchester, Richard II. giving a charter of incorporation for the college to William of Wykeham, the visit of Henry VI. to the shrine of St. Swithin in the cathedral, Charles I. brought a prisoner to Winchester in 1648, Cromwellian soldiers searching for Royalists, Sir Christopher Wren presenting his plans for a royal palace at Winchester to Charles II. The tableaux were mounted on platforms, which were fixed on trolleys. A memorial of the commemoration has been produced at the expense of the Mayor, Mr. Stopher. It is a medal which on the obverse has a



reproduction of the seal of Edward I., given to the city in 1276, and on the reverse the legend—"To commemorate the 700th anniversary of the Mayoralty of Winchester."

### HOSPITAL PLANNING.

A MEETING of the Birmingham and Midland Association of Medical Officers of Health was held on the 3rd inst., when a paper on "Hospitals for the Isolation and Treatment of Infectious Diseases" was read by Mr. George Wilson. The author said that, in order to stamp out infectious diseases in large towns and populous districts, sanitary authorities must provide adequate means for isolation and treatment, and such hospital accommodation must be open to all, and free from the stigma of pauperism. He was strongly of opinion that where such hospital accommodation was provided there would be no general insistence on payment, and especially when such cases were removed by order or with the approval of the medical officer of health. Unfortunately, the question of hospital accommodation as a means of sanitary defence was even yet but slowly recognised, and seldom entertained at all unless under the pressure of a severe epidemic. It was the duty of every urban sanitary authority at least to provide hospital accommodation for the reception of dangerous infectious cases, and even for small towns the minimum amount of accommodation should be sufficient for the reception of cases of both sexes suffering from two different kinds of infectious disease. In other words, there should be two separate blocks, each consisting of two separate wards and a nurses' room, and with an administrative block between. There was a small hospital of this kind at Solihull Union, which had done excellent service. Tents could only be regarded as makeshifts, and he felt sure that no sanitary inspector would advise his Authority to rely upon them as affording adequate accommodation for future outbreaks. For small districts he recommended that movable iron hospitals would be found more serviceable and cheaper in the long run than any other. Having referred to the difficulty of selecting sites, he spoke of the number of beds which should be provided. In manufacturing towns it was estimated that one bed for every 1,000 of the population should be provided, but for suburban districts he should think one in 1,500 would be sufficient. For nursing purposes he did not think that any single ward should contain more than twelve beds, and in permanent buildings each bed should be allowed a cubic space of at least 2,000 feet. Large hospitals should consist of pavilions in double echelon, as recommended in the circular of the Local Government Board. There was no reason why some of the pavilions should not be two-storeyed. For a hospital containing twenty beds, and consisting of two pavilions, administrative block, and outside offices, he was of opinion that the whole could be erected for 3,000*l.*, or about 150*l.* per bed.



### Arsenical Pigments in Mural Decoration.

SIR,—In your issue of June 21 Messrs. Woollams & Co. have been good enough to notice the abstract from my lecture given before the Leeds and Yorkshire Architectural Society. I regret that my attention has only just been directed to their remarks. Messrs. Woollams are inclined to question my assertion that "the size with which the colours are mixed before printing" wall-papers are—or have been—at times "impregnated with arsenic, added on account of its antiseptic properties." This statement was made upon what I considered the highest authority, from information kindly given to me some time ago by a manufacturer, and also more recently repeated by a second; but, as the head of the firm who afforded it is now abroad, I am unable to obtain his sanction to the publication of his name. My expression that "the size . . . used to be impregnated with arsenic," and that this addition is now rendered "unnecessary," should be sufficient to set at rest any uneasiness on the part of the public, if any there be.

I have also been privately reminded of the case "Steinhoff v. Woollams," which shows that paper manufacturers may still become the victims of the Imperial order which permits German makers to export colours containing arsenic. Why should not such vendors be compelled to declare upon sale whether their goods are free from arsenic or not? It is apparently impossible for the English manufacturer invariably to protect himself by private analysis only.

Messrs. Woollams in their letter also refer to my case of death from supposed poisoning with a wall-wash, which proved to be intensely arsenical. This case occurred in 1879, and was reported to the Committee of the Medical Society of London, but after their report (February 1880) was published. The excretions of my patient were most carefully analysed by Dr. Thorpe, F.R.S.,

Professor of Chemistry to the Yorkshire College, and by Mr. Bothamley, F.C.S., his Assistant-Lecturer, whose names are sufficient guarantee that all impurity of reagents employed was rigidly guarded against. The process employed was that of Fresenius and Von Babo—a most delicate one, in which no copper is used. This is not the place for the discussion of medical details, but perhaps I may be allowed to quote from Professor Thorpe's report, which runs as follows:—"Arsenic is present in both the urine and the fæces. The amount in both cases is extremely minute—far too small to admit of quantitative estimation—but the quantity of the arsenic film yielded by the fæces was unmistakably larger than that afforded by the urine." These excretions were only collected the day before the man died, and *six weeks* after he had been removed from the sitting-room where the poisonous wash existed. It is unfortunate that Dr. Allbutt and I had not sooner become alive to what we assumed, in the absence of other cause, to be at the root of the fatal malady. Had a post-mortem examination been allowed, we should probably have had no difficulty in detecting arsenic in large quantities in the internal organs, where it is well-known that it is often retained for a considerable time after entering the body.

I would merely add that my lecture was given from short notes, and the published abstract afterwards written in a condensed form—hence the absence of any detailed description of my cases.

I am Sir, faithfully yours,  
CHAS. J. WRIGHT.

Leeds: July 8, 1884.

### LEGAL.

#### High Court of Justice, Queen's Bench Division.—July 8.

(Before Mr. BARON HUDDLESTON.)

BLACK v. HAMMOND.

This was a case transferred from the Chancery Division, in which the plaintiff, Mr. William Black, the novelist, sought for an injunction restraining the defendant from erecting any building whatever on a small piece of land separating his (Mr. Black's) house from that belonging to Mr. Hammond. The person from whom the latter derived his title had entered into a covenant not to build on the piece of land in question, which was less than 300 square feet, and for which as much as 630*l.* had been paid, in such a way as to injure Paston House, Mr. Black's house, or to lessen its value. The plaintiff contended that by this covenant the defendant was prevented from erecting any building of any kind on the spot in question, but the defendant's contention was that the covenant was only a qualified one, and did no more than prevent his erecting anything there that would diminish the value of Paston House.

Mr. Baron Huddleston, in giving judgment, observed on the conflict of the evidence in the case as to the time at which a hoarding had been put up on the piece of land in question, which the witnesses for the plaintiff said had been erected in 1879, while those called by the defendant said it had been put up in 1870. If he rejected the positive evidence of the latter he should have to say that they had, in his opinion, been guilty of perjury. Happily he should not have to say that he disbelieved their testimony, and in taking this view he should not have to hold that the plaintiff's witnesses had said that which to their knowledge had been untrue. The evidence of the latter was much less direct, and, so far as it contradicted that of the defendant's witnesses, might well be considered to be the result of a mistaken view of facts which had occurred many years ago. The plaintiff was not entitled to the injunction for which he asked, nor to any damages, as his property had not been lessened in value by anything that the defendant had as yet done. The action, therefore, would be dismissed with costs.

(Before Mr. JUSTICE FIELD.)

TOMLINSON v. BURNETT.

The plaintiff in this case was an architect living at 35 Great James's Street, W.C., and the action was brought to recover fees amounting to 167*l.* 7*s.* for preparing plans for houses at Sutherland Gardens, and for the extra supervision which was requisite in consequence of the builder failing to carry out the contract. The defendant had a counter-claim of 2,000*l.* for alleged negligence, and by order had previously paid into Court 100*l.*, besides the sum of 27*l.* 10*s.* obtained by the plaintiff on account. It was agreed that the plaintiff was entitled to the sum of 91*l.* 7*s.* for plans, &c., and a fair sum for extra supervision from the time of the builders leaving the works until completion. Mr. Henry Hunt was appointed referee. The evidence showed that the plaintiff had been put to considerable annoyance, having been held responsible by several firms for goods supplied for the defendant's houses. Mr. Hunt reported that the plaintiff was entitled to the sum of 26*l.* 5*s.* for extra services, and that the defendant was not entitled to anything on his counter-claim. His Lordship entered judgment for the plaintiff, with full costs, accordingly.

The surveyors engaged on the side of the plaintiff were Mr. W. H. Haynes, A.R.I.B.A., and Mr. Robert Dixon, and Mr. Thicke for the defendant.



## WORKS IN PROGRESS.

**Messrs. Boyle & Son**, of Holborn Viaduct and Glasgow, are applying their system of ventilation to the new workhouse, Wandsworth. The air-pump ventilators will be affixed to the top of specially constructed air flues, which are carried above the roof of the building. The fresh air is admitted by Messrs. Boyle's improved inlet brackets. It is believed that when the work is completed, it will prove to be one of the most complete and successful systems of ventilation which has yet been applied to any public building.

**Messrs. Archibald Smith & Stevens**, of Janus Works, Queen's Road, Battersea, have received orders from the contractors, Messrs. Perry & Co., to put in one of Stevens & Major's patent hydraulic suspended lifts at the Queen's Mansions, Victoria Street, Westminster. The travel of the lift will be 76 feet.

**Messrs. J. Waygood & Co.**, of Falmouth Road, S.E., have received orders from the contractors, Messrs. Perry & Co., to supply and fix one of their hydraulic multiplying lifts at Prince's Mansions, Victoria Street. The travel of the lift will be 80 feet.

**Royal Agricultural Show, Shrewsbury.**—"Norton's" patent "Abyssinian" tube-well system has been adopted for the entire water supply of the grounds. Messrs. Le Grand & Sutcliff, hydraulic engineers, London, have furnished eight of these tube wells, 3 inches diameter, which are connected to one 5-inch cast-iron horizontal main. A central outlet from this main leads to a steam pump, which delivers a supply of 15,000 gallons per hour of clear, pure water, such as is seldom obtained at these meetings. The "Abyssinian" tube wells are not unknown in Shrewsbury, as a few years back Messrs. Le Grand & Sutcliff laid down a supply of 30,000 gallons per hour on this system for the Corporation Waterworks.

**Ebbesborne Wake, near Salisbury.**—A new treble and new tenor are to be added to the existing ring of three, making a ring of five, and a new frame and fittings for the whole. The work has been entrusted to Messrs. Llewellyns & James, Bristol.

## CHURCH BUILDING AND RESTORATION.

**South Elmsall, near Doncaster.**—The foundation-stone of a new Wesleyan church in this village was laid on Thursday, June 19. The buildings are of Elland flagstone, with sandstone dressings and Ancaster for the interior. The woodwork is of pitch pine and English oak. The church gives accommodation for 350 persons. There are two vestries in the rear. The entrance to church is through tower, above which rises a slate spire to 90 feet. The works are being carried out, at a cost of 1,500*l.*, from the designs of Mr. James Wilson, architect, of Leeds.

**Birmingham.**—The memorial-stones of the Asbury Memorial Wesleyan chapel, Handsworth, have been laid. The chapel is Early English in style, and will be built of brick, with stone dressings. Internally the chapel has a centre aisle and side aisles, and will accommodate about 600 worshippers. The roof is to be of stained pitch pine, and the seats of pitch pine, and the floor will be composed of wood blocks. The cost of the edifice will be about 4,000*l.*, and it is being built by Mr. J. Bowen, of Balsall Heath, from the plans of Mr. Ball, architect, of Corporation Street, Birmingham.

**Steeple.**—The new church dedicated to St. Lawrence and All Saints has been opened. The cost of the building has been about 2,000*l.*, and it has been erected by Mr. Letch, of Braintree, from the designs of Mr. Fred Chancellor, of Chelmsford.

**Derby.**—The first sod in the excavations preparatory to the erection of a permanent church for the outlying district of St. John has been cut. Plans have been prepared by Mr. A. Coke Hill, and the contract has been let to Messrs. Walker & Slater.

**Heaton.**—The design of Messrs. S. Oswald & Son, architects, of Newcastle-on-Tyne, has been selected in limited competition for a new Wesleyan chapel at Heaton. The buildings comprise a chapel with 900 to 1,000 sittings, a lecture hall for 350, and five class-rooms and vestries. The design is in the early Gothic style, with tower nearly 90 feet high, at the corner of Heaton and Tyne-mouth Roads.

**Balerno.**—A new United Presbyterian church has been erected in Balerno, from designs by Mr. James Fairley, of Edinburgh. The contractors are:—Messrs. Turner, Juniper Green, mason; Fairbairn, Balerno, joiner; Nisbet, Juniper Green, plumber; Anderson, Edinburgh, slater; and McDonald, Edinburgh, plasterer.

**Meltham.**—The memorial-stones of a Wesleyan chapel have been laid. The building will be in the Classic style of architecture, and will provide total accommodation for about 800. The outside walls will be of pitch-faced rocks with ashlar dressings. The contractors are:—Masons, Messrs. E. Pogson & Sons; joiners, Messrs. Garlick Bros.; painters, Messrs. J. Preston & Sons; slaters, Messrs. W. Goodwin & Sons; plumber and glazier, Mr. George Garton; plasterer, Mr. Geo. Jackman; and the architect is Mr. Joseph Shaw, Holmfirth.

**Warwick.**—A chapel erected by public subscription, at a cost of over 700*l.*, has been opened at the workhouse. The building is capable of accommodating some 250 persons, and has been erected from plans prepared by Mr. F. H. Moore, architect, Warwick; the contractor being Mr. Thomas Bailey, builder, &c., Leamington. It consists of nave, chancel, and porch, and is built of ordinary pressed red brick of the district, with Bath stone copings, window-heads, and dressings.

## GENERAL.

**The Marquis of Bute** has given permission to art students and others to copy the pictures in the Bute collection now exhibiting in the Corporation Galleries, Glasgow.

**The Aberdeen Art Gallery** has obtained through bequest a valuable collection of paintings belonging to the late Captain Gordon of Fyvie. Mr. Macdonald has also offered to present to the museum a large granite figure from a design prepared by Mr. Lawson, sculptor, London. To these gifts are to be added the sculptured head of Minerva, presented by Sir John Steele, which now forms the keystone of the archway over the main entrance to the building.

**The Liverpool Reform Club** has been decorated according to designs by Mr. Edmund Kirby, architect.

**The Estimates** for the new town hall, at Hawick, amount to over 8,500*l.*, exclusive of architect's fees, painting, and other expenses, which will increase the cost to over 10,000*l.* The sum that was fixed in the instructions to competitors was 5,000*l.*

**The Design** of Messrs. S. Oswald & Son, of Newcastle, has been selected in limited competition for a new Wesleyan chapel to be erected at Heaton. The chapel will seat 900 to 1,000 persons, and adjoining it there will be a lecture hall for 350, besides five class-rooms and vestries. The style adopted is Early English.

**Mr. W. H. Weatherill**, of Stockton-on-Tees, has been appointed architect for the new Board schools in Tilery Road in that town.

**The Foundation-stone of the New Putney Bridge** will be laid to-day (Saturday) by the Prince of Wales. The bridge is to be of masonry, having five elliptical arches, and is constructed by order of the Metropolitan Board of Works. Models and plans of the structure will be exhibited to the Prince and Princess of Wales.

**Residential Flats, West Brighton.**—We have been asked to state that the design for Mr. Chappell's new buildings was prepared in his office by Mr. Stark.

**The Old House** in Middle Scotland Yard, which, since the year 1820 has been used as the Royal Almonry, is about to be pulled down to clear the ground for some new buildings, which are to be erected on the vacant land belonging to the Crown in its immediate vicinity.

**Mr. Gustav Bishop** has obtained a prolongation for seven years of his patent for filters, in which spongy iron is used as the purifying medium.

**The Lord Mayor**, supported by Sir James Lawrence, Lord Reay, Mr. Alderman de Keyser, Mr. P. L. Simmonds, and an influential company, lately distributed the medals awarded to successful competitors at the recent Amsterdam International Exhibition. Mr. H. C. Stephens, the ink and wood stain manufacturer, of Aldersgate Street, received no less than three gold medals for his useful productions.

**A Builder**, living in Highgate, has been fined 8*l.* and 2*l.* 2*s.* costs for having covered in the drains and foundation of a house erected by him near Lichfield Grove, Finchley, without giving notice to the surveyor of the Board of his intention to do so, and further, for having refused to lay open certain specified work for the inspection of the surveyor.

**The Proposed Wallace Statue.**—Upwards of twenty designs have been received in Aberdeen from British and foreign sculptors. They have been unpacked and deposited in the Joint Hall in the Municipal Buildings, but will remain covered till Mr. Steill's trustees and their assessors, Sir Noel Paton and Dr. Rowand Anderson, have adjudicated on them. These gentlemen are expected to meet in Aberdeen with the view of settling on the design to be adopted, and that to which the premium of fifty guineas shall be awarded as next in order of merit. A desire has been expressed that arrangements be made for exhibiting all the designs to the public during a limited period after the adjudication.

**Messrs. Robert Boyle & Son's Patent Self-Acting Air-pump Ventilators** have just been applied by the Admiralty to the whole of the drainage system at Sheerness Dockyard. Messrs. Boyle have also recently applied their system of ventilation to the General Post Office, Liverpool; General Post Office, Leeds; Grand Hotel de Grasse, Alpes Maritimes; Albert Memorial Museum, Exeter; Brixton Town Hall; Rochdale Free Library, Rochdale; New Public Baths, Forest Hill; and the Convent of the Good Shepherd, Hammersmith.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, JULY 12, 1884.

### COMPETITIONS OPEN.

RUGELEY.—July 19.—Designs are required for Additions and Alterations at Grammar School. Mr. Robert Landor, Clerk to the Governors, Rugeley.

NORTH SHIELDS.—Aug. 18.—Plans are required for Alterations and Additions to the Workhouse. Mr. Christopher Scott, Guardians' Hall, North Shields.

### CONTRACTS OPEN.

ACCRINGTON.—For Building Two Detached Houses and Farm Buildings. Mr. Henry Ross, Architect, 5 Birch Street, Accrington.

ASHBOY.—July 26.—For Building Schools. Mr. W. Hague, Architect, 62 Dawson Street, Dublin.

ASHFORD.—July 16.—For Rebuilding No. 77 High Street. Mr. W. R. King, Architect, 22 Bank Street, Ashford.

BEAUMARIS.—July 14.—For Works at St. Mary's Church. Mr. T. Inman Jones, Architect, 8 Town's End, Beaumaris.

BELFAST.—July 19.—For Erection of Shops in Smithfield Market. The Borough Surveyor, Town Hall, Belfast.

BRADFORD.—July 15.—For Extension of Infirmary. Messrs. Milnes & France, Architects, Bradford.

BRENTWOOD.—July 19.—For Building Retort-house at Gasworks. Mr. Jabez Church, 17b Great George Street, Westminster.

BRIDGEN.—July 15.—For Additions to Goods Shed. Mr. F. G. Saunders, Secretary, Paddington Station.

CLONMEL.—July 19.—For Restoration of Abbey of St. Francis. Mr. Walter G. Doolin, M.A., Architect, 20 Ely Place, Dublin.

DODDINGHURST.—July 21.—For Additions to All Saints' Church. Rev. F. Stewart, Rectory, Doddington, near Brentwood, Essex.

DROITWICH.—For Building School and Teacher's House at Rashwood. Mr. John Cotton, Architect, 37 Waterloo Street, Birmingham.

ECCLESHILL.—July 14.—For Building House. Mr. Jowett Kendall, Architect, Idle.

FINCHLEY, N.—For Completing Seven Houses and Shops. Messrs. Gordon & Lowther, 1 Guildhall Chambers, Basinghall Street, E.C.

FRAMPTON FEN.—For Alterations to Farm Buildings. Mr. J. B. Corby, Architect, 69 Scotgate, Stamford.

GATESHEAD.—July 16.—For Building Passenger Station, Platform, Roofing Offices, Shops, &c. Mr. William Bell, Architect, Central Station, Newcastle-on-Tyne.

GREAT YARMOUTH.—July 17.—For Building House, Cobbold Island. Mr. Sidney Rivett, Architect, Southtown, Great Yarmouth.

GLOUCESTER.—July 24.—For Additions and Alterations at General Infirmary and Eye Institution. Messrs. Waller, Son & Wood, Architects, 17 College Green, Gloucester.

LEEDS.—July 21.—For Erection of Restaurant Buildings. Mr. C. S. Nelson, Architect, Albert Chambers, Park Row, Leeds.

LIVERPOOL.—July 21.—For Building Station, with Hotel, Shops, and Offices. Mr. H. Shelderdine, Architect, Exchange Station, Liverpool.

LLANTRISANT.—July 17.—For Additions to Dinas Schools. Mr. J. J. Evans, Architect, Maesffwrdd, Treorik.

MAIDSTONE.—July 24.—For Additions to Ophthalmic Hospital. Mr. E. W. Stephens, Architect, West Borough Chambers, Maidstone.

MIDLETON.—July 14.—For Building Corn Mill and Kiln. Mr. J. F. McMullen, C.E., Mary Street, Cork.

NEWARK.—July 16.—For Building Sale Room and Offices. Mr. George Sheppard, Architect, 9 Kirkgate, Newark.

NEWBURY.—Aug. 4.—For Building School and Master's House for Governors of St. Bartholomew's Grammar Schools. Mr. J. P. Power, Architect, 67 Basinghall Street, E.C.

NEW HAMPTON.—For Additions to Schools. Mr. C. L. Luck, Architect, Carlton Chambers, 12 Regent Street.

NORMANTON.—July 16.—For Building Chapel. Mr. W. Hanstock, Architect, Branch Road, Batley.

NORTHAMPTON.—July 14.—For Enlargement of Dining-hall, Erection of Workshops, &c., for the Guardians. Mr. A. Milne, Surveyor, Derngate, Northampton.

NORTHMOLTON.—Aug. 6.—For Repairs and Re-seating Church. Mr. E. Ashworth, Architect, Exeter.

PETERBOROUGH.—July 14.—For Building School and Class-room. Mr. H. M. Townsend, Architect, The Precincts, Peterborough.

PETERBOROUGH.—July 19.—For Building Cottages, &c. Mr. H. M. Townsend, Architect, The Precincts, Peterborough.

POPLAR.—July 18.—For Additions to Warehouse. Mr. G. Morris, Architect, 6 Oriental Street, East India Road, Poplar.

SANTHORPE.—July 12.—For Building Cemetery Chapel, Mortuary, Lodge, Entrance Gates, and Palisading. Mr. Robert Clamp, 5 Land of Green Ginger, Hull.

SHEFFIELD.—July 22.—For Casual Wards and other Buildings at the Workhouse. Mr. James Hall, Architect, Paradise Square, Sheffield.

SOUTHAMPTON.—For Building Yacht Club House. Mr. T. A. Skelton, Architect, Southampton.

STAMFORD.—July 19.—For Additions to Tramp Day Ward at Workhouse. Messrs. J. & C. Richardson, Architects, 15 Barn Hill, Stamford.

STRETFORD.—July 14.—For Building Cemetery Chapel and Lodge. Messrs. Bellamy & Hardy, Architects, Lincoln.

SWAFFHAM.—July 12.—For Building Stable, Bullock Boxes, Waggon Lodge, &c. Mr. W. G. Winicars, Solicitor, Swaffham.

THORNTON-IN-CRAVEN.—July 17.—For Building Residence. Messrs. Paley & Austin, Architects, Lancaster.

WIMBORNE.—July 18.—For Building Bridge over the River Stour. Mr. W. J. Fletcher, Wimborne.

WILLESDEN.—July 21.—For Building Manufacturing Premises and Dwellings. Mr. W. D. Bullis, Surveyor, 21 Finsbury Pavement, E.C.

WORKINGTON.—July 22.—For Building Board School, Boundary Wall, Dwelling House, &c. Mr. G. D. Oliver, Architect, 44 Pow Street, Workington.

WORTLEY.—July 28.—For Erection of Schools, Out-buildings, and Boundary Walls. Mr. R. L. Adams, Architect, Imperial Buildings, Bond Street, Leeds.

WREXHAM.—July 12.—For Building Chapel at Moss. Mr. A. C. Baugh, Architect, Wrexham.

### TENDERS.

#### ABERDEEN.

For Alterations on Parish Church, Strichen. Messrs. ELLIS & WILSON, Architects, Aberdeen.

#### Accepted Tenders.

Cassie, Strichen, carpenter	£325	0	0
Wiseman, Fraserburgh, plasterer	84	17	0
Merson, Strichen, slater	64	0	0
Stuart, Fraserburgh, painter and glazier	63	0	0
Sim, Strichen, mason	62	0	0
Rennie, Fraserburgh, plumber	17	7	6

Total £616 4 6

N.B. Heating apparatus not included in above.

#### BOURNEMOUTH.

For Erection of Villa, Branksome Wood Road, Bournemouth. Mr. H. E. HAWKER, Architect. Quantities supplied.

Smith	£1,610	0	0
James	1,490	0	0
Pike	1,478	0	0
Huey	1,464	0	0
Stanley	1,421	0	0
Jeanes	1,387	0	0
Stroud	1,371	0	0
Regler & Crane	1,360	0	0
Lucas & Cosser	1,357	0	0
Bevan	1,309	0	0

#### CARDIFF.

For Alterations and Additions to Premises, 65 Crockherbtown, Cardiff. Mr. EDWARD H. BRUTON, A.R.I.B.A., Architect, Cardiff.

		Time.
Davies	£1,130	0 0 3 months
Shepherd	1,112	0 0 13 weeks
Shepton	1,105	0 0 —
Lock	1,079	0 0 10 weeks
JONES BROS. (accepted)	1,049	0 0 11 weeks
Gough	1,031	0 0 4 months

Smallbridge, Short & Chivers too late.

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And 238 Upper Thames Street, Blackfriars, E.C. — WORKS, ROTHERHAM.



## BRIGHOUSE.

For the Erection of Two Shops in Elland Road, Brighouse, Yorks, for Mrs. Ann Milnes. Mr. R. F. ROGERSON, Architect, Brighouse.

Masons.	
Cross & Son, Brighouse	£33 10 0
Fearnley, Brighouse	29 11 10
J. BOTTOMLEY (accepted)	27 0 0

Joiners.	
Wright, Brighouse	79 5 0
T. Bottomley, Rastrick	77 10 0
Crowthier, Brighouse	76 0 0
Bentley, Rastrick	75 0 0
SYKES & SONS, Brighouse (accepted)	70 0 0

Plumbers.	
Lawson, Brighouse	33 16 0
BROOKER, Brighouse (accepted)	33 15 6

Slaters.	
Fearnley, Brighouse	5 0 0
Smithies, Bradford	5 0 0
J. BOTTOMLEY, Brighouse (accepted)	4 10 0

Plasterers.	
Anderson & Hoynes, Brighouse	5 5 0
Heponstall, Brighouse	4 12 0
GLENDHILL & BARRACLOUGH, Brighouse (accepted)	4 10 0

Revolving Shutters.	
Hodkinson & Clarke, London	35 0 0
Salmon, Barnes & Co., Ulverston	34 13 0
The Executors of W. Gradwell, Barrow-in-Furness	30 0 0
Spink & Mallinson, Manchester	26 15 0
Stones, Ulverston	25 18 9
THRESH, Bradford (accepted)	22 0 0

## CARSHALTON.

For Alterations and Additions to Stabling and Erection of Coach-house, &c., at Chessingham House, Denmark Road, Carshalton, Surrey, for Mr. J. H. Davis. Mr. THOS. LOCKWOOD HEWARD, Architect.

Hazell, Beddington Corner	£193 0 0
Sanders, New Malden	187 0 0
Stewart, Wallington	178 0 0
Evans, Carshalton	169 0 0
Smith & Bence, London	165 0 0
Howe & White, Wallington	165 0 0
Clarke, Croydon	153 0 0
ALDOUS, Carshalton (accepted)	125 16 0
Architect's Estimate	160 0 0

## CLIFTON, BRISTOL.

For Building new Parish Room in connection with All Saints' Church, Clifton, Bristol. Mr. E. HY. EDWARDS, Architect.

Bastow	£2,703 0 0
Crocker	2,569 0 0
BEAVEN (accepted)	2,428 0 0

For Building new Choir Schools in connection with All Saints' Church, Clifton, Bristol. Mr. E. HY. EDWARDS, Architect.

Bastow	£1,590 0 0
Crocker	1,582 0 0
Belmont	1,494 0 0
Cowlin & Son	1,470 0 0
BEAVEN (accepted, but reduced)	1,450 0 0
Summon	1,423 0 0

## CLIFTON, YORKS.

For Painting at various Places on the Kirklees Estate, Clifton, Yorks, for Sir George Armytage, Bart. Mr. R. F. ROGERSON, Architect, &c., Brighouse.

	Woodhead (external).	Gardens (external and internal).
Hinchcliffe & Hainsworth	£15 0 0	£94 0 0
Dyson	17 10 0	82 10 0
Smith	10 10 0	82 1 10
Hutton	20 0 0	80 0 0
Stuttard	17 10 0	74 0 0
Marshall & Oldfield	14 0 0	70 0 0
Garside Bros.	—	69 10 0
ROBINSON & SON (accepted)	12 0 0	63 10 0

## CORK.

For Lodge to Principal Entrance, Blarney Castle, County Cork. Mr. ROBERT WALKER, Architect, 17 South Mall, Cork.

Forde, Iniscarra	£329 10 0
Sisk, Cork	299 0 0
Kellar, Cork	284 13 0
DELANY, Cork (accepted)	252 5 0

For Four Semi-detached Villas, Monkstown, County Cork. Mr. ROBERT WALKER, Architect, 17 South Mall, Cork. Quantities supplied.

Roberts	£3,600 0 0
Sisk	3,456 9 8
Connell	3,222 10 0
Kellar	3,093 0 0
O'Flynn	2,900 0 0
Delany	2,881 0 0

## DARTMOUTH.

For Building Two Houses and Shops, Lower Street, Dartmouth, for Mr. Hamlyn. Mr. E. H. BACK, Architect, Dartmouth. Quantities by Architect.

WILLIAMS (accepted)	£695 0 0
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For Building Residence at Broadstone, Dartmouth, for Mr. D. Manning. Mr. E. H. BACK, Architect, Dartmouth. Quantities by Architect.

Williams	£435 0 0
Voisey	410 0 0

For Alterations to Four Tenements at Kingswear, for Mr. H. Parry. Mr. E. H. BACK, Architect, Dartmouth.

Winsor	125 0 0
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## DAWLISH.

For School Accommodation for the Congregational Building Committee, Dawlish. Mr. GEO. SOUNDON BRIDGMAN, Architect, Torquay.

Mountstephen, Torquay	£512 10 0
Goss, Torquay	485 17 6
Friend, Dawlish	495 0 0
Hawkins, Dawlish	404 0 0
Lovelys, Dawlish	394 0 0
Early, Dawlish	390 0 0
CUNDY & STOYLE, Dawlish (accepted)	365 0 0

## GREAT GRIMSBY.

For Erection of new Board Schools for The Clec, with Weelsby School Board, for 500 Children. Mr. E. W. FAREBROTHER, A.R.I.B.A., Architect, Grimsby.

RIGGALL & HEWINS (accepted)	£3,457 0 0
-----------------------------	------------

For Erection of new House, Town Hall Street, Grimsby, for Mr. Calvin Shankster. Mr. E. W. FAREBROTHER, A.R.I.B.A., Architect, Grimsby.

Doughty	£649 5 0
Simms	606 0 0
Smith	580 0 0
J. & R. G. Guy	573 0 0
RIGGALL & HEWINS (accepted)	568 0 0

## LONDON.

For New Warehouse in Suffolk Lane, for Sir Francis Wyatt Truscott. Mr. WIMBLE, Architect.

BRASS (accepted)	£3,500 0 0
------------------	------------

For Repairs and Painting at the Dyers' Hall, Dowgate Hill, for the Worshipful Company of Dyers. Mr. J. HATCHARD SMITH, Architect.

Ashby & Horner	£475 0 0
Shurmur	450 0 0
Kinnimont	437 0 0

For Alterations, &c., at the Anchor and Hope Public House, Charlotte Street, Blackfriars. Mr. F. W. WILLIS, Architect.

Taylor	£595 0 0
Wilkinson	586 0 0
Jackson & Todd	578 0 0
SHURMUR (accepted)	567 0 0

For Alterations, &c., to the Duke of Gloster, Seabright Street, Hackney Road. Mr. BRUCE J. CAPELLI, Architect.

Pritchard	£400 0 0
Anley	377 0 0
Shurmur	369 0 0
Marr	365 0 0
Kevan	319 0 0
PRYOR (accepted)	290 0 0

For Alterations at the Roebuck Tavern, Kennington Cross, S.E., for Mr. F. Dori. Mr. H. I. NEWTON, Architect, 17 Queen Anne's Gate, S.W.

Burman & Sons	£497 0 0
Schlatter	455 0 0
Jennings & Son	380 7 0
Cook	358 0 0
Crabtree	345 0 0
WALKER (accepted)	319 0 0

For Providing and Fixing Fire Extinction Appliances to the Workhouse, Harrow Road, for the Guardians of Paddington. Messrs. A. & C. HARSTON, Architects, 15 Leadenhall Street, E.C. Quantities not supplied.

Merryweather, Greenwich	£560 0 0
Isaac, Liverpool	449 14 0
Morris, Salford	442 19 0
Crittall, London	429 17 0
Gardner, Strand	420 0 0
Simpson & Co., London	398 0 0
Shand, Mason & Co., London	397 0 0
STRIDER, Southwark Bridge Road (accepted)	390 0 0

For Providing and Fixing Wrought-iron Bars to the Twenty-three Windows at the St. George-in-the-East Infirmary, for the Guardians. Messrs. A. & C. HARSTON, Architects, 15 Leadenhall Street, E.C. Quantities not supplied.

Deacon	£150 0 0
Hobbs	98 0 0
Flint	74 15 0
Stewart	57 10 0
Whitford	55 0 0
Castle	49 0 0
Aldridge & Co.	48 15 0
Johnson Bros.	48 10 0
Vigor	46 0 0
PAULKNER, Hirsham, Walton-on-Thames (accepted)	45 10 0

For Painting, Distempering, and other Work at the Casual Wards and Workhouse, &c., belonging to the St. George-in-the-East Guardians. Messrs. A. & C. HARSTON, Architects, 15 Leadenhall Street, E.C. Quantities not supplied.

Casual Wards, Workhouse.	
Deacon	£150 0 0
Richards	60 0 0
Hobbs	65 0 0
Castle	49 0 0
Gibben	70 0 0
Vigor	67 0 0
McCarthy	59 0 0
Periera	47 0 0
STEWART (accepted)	44 15 0

For Providing and Fixing Office Fittings to the New Offices of the Chelsea Guardians, King's Road. Messrs. A. & C. HARSTON, Architects, 15 Leadenhall Street, E.C. Quantities not supplied.

Coffin & Co.	£196 0 0
Fleming	191 0 0
Spicer	159 10 0
Pauler & Powditch	155 0 0
Trent Bros.	149 13 0
Burrell & Norton	148 10 0
Building, Fitting and Furnishing Company	145 0 0
KING (accepted)	134 0 0

## LONDON—continued.

For Electric Bells and Fire Alarms in Workhouse School and Infirmary, Hornsey Road, and Fire Alarms in Workhouse, Upper Holloway.

ECK, CALLON & Co. (accepted).

For the Erection of Artisans' Dwellings in Cartwright Street, Royal Mint Street, Minorities, E. Messrs. DAVIS & EMANUEL, Architects, 2 Finsbury Circus, City, E.C. Quantities supplied by Mr. H. P. Foster, 5 John Street, Adelphi, W.C.

F. & F. J. Wood	£19,483 0 0
Boyce	16,058 0 0
Wall Bros.	15,990 0 0
Mowlem & Co.	15,665 0 0
Shurmur	15,480 0 0
Shaw	15,180 0 0
Williams & Son	15,100 0 0
Collis & Son	14,910 0 0
Gentry	14,500 0 0
Harris & Wardrop	14,370 0 0
Laurance & Son	14,280 0 0
Grover	13,970 0 0
Jerrard	13,793 0 0

For Painting Board Schools.

Snowfield.	
Greenwood	£465 0 0
Kearley	397 0 0
Higgs	395 0 0
Hobson	345 0 0

Brunswick Road.	
Linn	302 0 0
Tail & Co.	298 0 0
Robey	266 0 0
Atherton & Latta	255 0 0
Derby	250 0 0
Vigor & Co.	192 10 0

Reddin's Road.	
Stanley & Sons	£771 0 0
Higgs & Hill	466 0 0
Jerrard	434 0 0
Knight & Walden	426 10 0
Hobson	407 0 0
Mallett	390 0 0

Pulney Street.	
Kearley	447 0 0
Petchy	436 18 7
McCormick & Sons	427 0 0
Hobson	382 0 0
Hornett	371 0 0
Davis Bros.	356 0 0

Woods Road.	
Kearley	547 0 0
Nightingale	515 0 0
Holding & Son	506 0 0
Jerrard	489 0 0

Duncan Road.	
Kirby & Chase	471 0 0
McCormick & Sons	448 10 0
Goodman	425 0 0
Shurmur	423 0 0
Knight & Walden	423 0 0
Smith & Son	377 0 0
Grover	365 0 0

Edward Street.	
Holding & Son	278 0 0
Davis	253 9 6
Herget	220 0 0
Johnson	194 0 0
Jerrard	167 0 0

Cranbrook Road.	
Shurmur	630 0 0
Willmott	564 10 0
Flaxman	546 0 0
Derby	513 0 0
Steel Bros.	498 10 0
Robey	390 0 0

Summerford Street.	
Shurmur	693 0 0
Snewin Bros. & Co.	675 0 0
Willmott	497 0 0
Grover	477 0 0
Howard	466 0 0

Waterloo Road.	
Stanley & Sons	658 0 0
Nightingale	598 0 0
Hobson	567 0 0
Lathey Bros.	563 0 0
Higgs & Hill	558 0 0
Mallett	535 0 0
Hornett	525 0 0

Lyham Road.	
Johnson	475 0 0
Nightingale	463 0 0
Rice	462 0 0
Mallett	455 0 0
Higgs	430 0 0
Hobson	428 0 0

Campbell Street.	
Addicott	497 0 0
Kearley	475 0 0
Stimpson & Co.	407 0 0
Oldrey	396 0 0
Petchey	387 0 0
Titmas	374 0 0
Hobson	347 0 0

North End Road.	
Kearley	477 0 0
Hornett	467 0 0
Oldrey	445 0 0
Knight & Walden	443 0 0
Stimpson & Co.	337 0 0
Smith & Son	378 0 0

Park Walk.	
Kearley	459 0 0
Lathey Bros.	453 0 0
Oldrey	429 0 0
Stimpson & Co.	382 0 0
Smith & Son	374 0 0

For Heating the Gymnasium, Somers Town. Bacon & Co.



## NEWPORT.

For Building New Lecture Hall and Additional School-room, connected with Havelock Presbyterian Chapel, Newport (Mon.). Messrs. W. G. HABERSON & PAWCKNER, Architects, London, Newport, and Cardiff. Quantities not supplied.

Moore	£460 0 0
Moulton & Brownscombe	442 0 0
Martin	440 0 0
Westacott	435 0 0
Sharrein	419 0 0

## NORFOLK.

For Repairing Chancel Roof and Putting New Nave Roof to Holme Church. Messrs. WM. ADAMS & SON, Architects, King's Lynn. Quantities by the Architects.

Highest Tender	£215 10 0
LEACH, Lynn (accepted)	145 10 0

Six Tenders were received.

## PAIGNTON.

For proposed Additions to the Home of the Marist Fathers, Paignton, Devon. Mr. GEO. SOUDON BRIDGMAN, Architect, Torquay.

Mountstephen, Torquay	£1,737 10 0
King & Son, Paignton	1,649 0 0
Goss, Torquay	1,610 0 0
Lamacraft, Dawlish	1,550 0 0
Bovey, Torquay	1,490 0 0
Soden, Ashburton	1,481 17 6
Bridgman, Paignton	1,472 10 0
WEBBER, Paignton*	1,437 0 0

\* Accepted subject to minor alterations.

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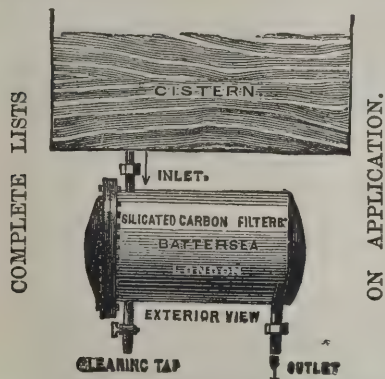
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## NORTHAMPTON.

For the Erection of New Schools in the Military Road, to accommodate 1,164 Children, for the Northampton School Board. Mr. CHAS. DORMAN, Northampton, and Mr. W. TALBOT BROWN, Wellingborough, joint Architects.

Fisher	£8,960 0 0
Cosford	8,900 0 0
Woodford & Son	8,350 0 0
Dunckley	8,211 10 0
Brown	8,198 0 0
Green	8,180 0 0
Ireson	8,157 0 0
Archer & Bransom	8,040 0 0
Martin	7,688 0 0
Watkin	7,590 0 0
WINGROVE (accepted)	7,127 0 0

## NOTTINGHAM.

For Building Factory Premises, Radford Boulevard, Nottingham. Mr. LAWRENCE BRIGHT, Architect. Quantities by the Architect.

Wartnaby, Nottingham	£8,900 0 0
Dudson & Parrish, Nottingham	8,455 0 0
Fisher, Hutchinson & Ashling, Nottingham	8,400 0 0
Messom, Nottingham	8,259 0 0
Bradley & Barker, Nottingham	8,200 0 0
Wheatley & Maule, Nottingham	8,200 0 0
Lynam & Kidd, Nottingham	8,150 0 0
Wooll Bros., Nottingham	8,059 0 0
Huskinson & Jeffreys, Nottingham	8,005 0 0
Baines, Newark	7,990 0 0
Slight, Nottingham	7,980 0 0
Bell & Son, Nottingham	7,922 0 0
Hind, Nottingham	7,810 0 0
Brown & Son, Newark	7,800 0 0
Vickers, Nottingham	7,754 0 0
DENNETT & INGLE, Nottingham (accepted)	7,713 0 0

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## ROCHESTER.

For Construction of Iron Pier at the Esplanade.  
KELLETT & BENTLEY (accepted) . . . £2,000 0 0

## SEAHAM HARBOUR.

For Building two Chapels and Superintendent's Lodge, New Burial Ground, Seaham Harbour. Mr. WILLIAM FORSTER, Architect. Quantities by the Architect.

	Two Chapels.	Superintendent's House.
Sharp, Sunderland	£1,697 0 0	£725 18 0
Burrell, Seaham	1,563 0 0	721 0 0
Chrisop & Tough, Sunderland	1,353 0 0	631 19 0
G. & I. Oates, Painsheer	1,323 11 3	576 0 0
Scott & Son, Sunderland	1,269 15 5	538 2 6
SANDERSON, Durham (accepted)	1,163 0 0	587 10 0

## WALSDEN.

For Shop and House at Walsden. Mr. G. W. JACKMAN, Architect. Quantities by Mr. Jesse Horsfall, Todmorden.

## Accepted Tenders.

Hartley & Smith, mason.  
Crossley, joiner.  
Buttsworth & Ogden, plumber.  
Smith, plasterer.  
Barnes & Sons, slater.

## WATFORD.

For Building Infants' School, and Alterations to Girls' School, Watford. Mr. W. H. SYME, A.R.I.B.A., Architect.

G. & J. Waterman	£1,097 0 0
Pratt	1,084 0 0
CHADWICK (accepted)	1,060 0 0

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Stone, Rough Blocks for Engineering Purposes, &c., on applica-  
tion to T. F. LILLY, Gillingham, Dorset.

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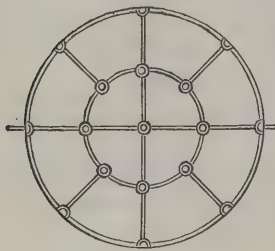
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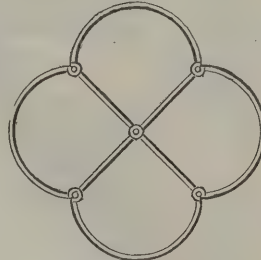
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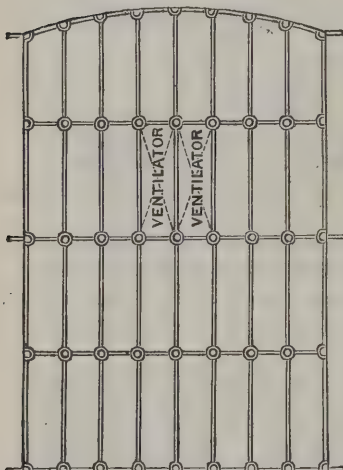
CABLE LIGHT

The Patentee begs to call particular attention to the great strength of this construction. The Bars and Bosses, being of malleable wrought iron, form an exceedingly firm joint at the intersection of bars. They are durable, and of light appearance, the Bosses being small and not unsightly. They can be made at very short notice, and at the price of an ordinary cast iron sash.

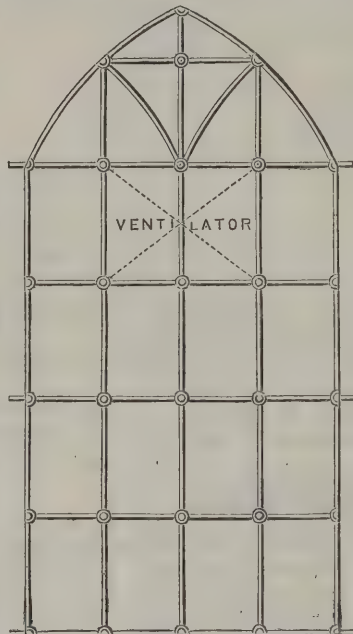
PRICES UPON APPLICATION.



CABLE LIGHT.



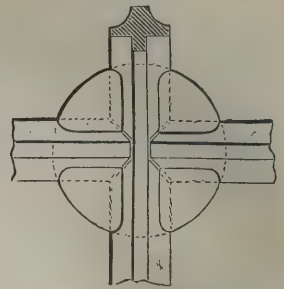
CLOSE BAR SASH (obviating use of Window Guards).



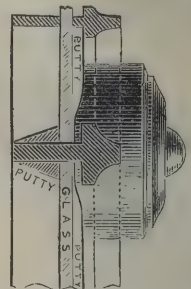
ORDINARY WAREHOUSE AND SCHOOL SASHES.



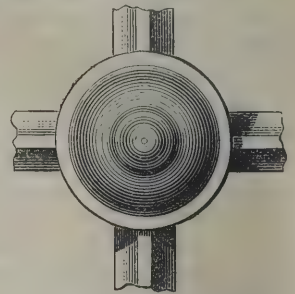
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# The Architect.

## FALSE ECONOMY IN BUILDING.



CURIOUS illustration of one of the weakest points in the practice of modern building was afforded at the Conference which was conducted under the administration of a committee of the Institute of Architects at the Health Exhibition last week. Thirty or forty short papers and speeches in the interest of wholesome building were delivered at the three sittings which were held; almost all of them came from professional architects; the range of subjects was considerable, from the smell of drains and the smoking

of chimneys to the artistic effect of colour decoration and the enjoyment of flowers; and it was singularly noticeable that scarcely a question of any moment was raised without its being made to turn upon considerations of expense. Either the proposer of an improvement took pains to deprecate criticism by arguing that it would not be expensive, or his critics took for their weightiest objection the apprehension that it would be so. As a rule, the supposition that anything could cost nothing at all was regarded as a mathematical impossibility, and the simplest hint that it would cost a good deal was taken for an insurmountable obstacle. The best policy was to admit that it would cost something and apologise for it. All this, we say, formed a remarkable illustration of a certain parsimonious instinct of modern English architects which ought to be seen to.

Why it should be so we do not for the present inquire; but it must for a long time have impressed most people of liberal intelligence that the typical British architect, who is one of the most timid of men in all things, is so particularly timid about money matters as to hamper his action materially. A little story is told of a gentleman who some twenty years ago was in the front rank of the metropolitan profession. On one occasion a client, having had certain plans explained to him, and being exceedingly pleased with the successful way in which they fulfilled his instructions, inquired at last what would be the cost. The cost, said the architect, *without* the deprecatory expressions that are customary, would be so much. "Indeed?" was the rejoinder, "that is a large sum of money." Said the architect calmly, "That's your affair, not mine." Most architects of the present day will be disposed to doubt the truth of such an audacious anecdote. It would have been much more in accordance, we need scarcely say, with everyday usage, if the observation about the large sum of money had been humbly taken as a personal rebuke, to be answered rather by meek confessions of regret, entreaties to be permitted "to try whether some reduction cannot be made," and, possibly in some cases, by declarations, more respectful than self-respecting, that no one else can do things cheaper.

A cheap building, like a cheap coat, is an essential mistake. Good value for the money is another thing; but a market price cut down to the lowest figure, whether with the builder or the tailor, means scamped materials and scamped workmanship, and cannot mean anything else. And the fact is—strange as it may seem—that the straining after cheapness in building is not the act of the public, but the folly of architects. Indeed, to such an extent is this folly now carried, that, even when leading architects meet as they did last week, in the very face of the public, to discuss the urgent necessity for making the dwelling-houses of the better classes of English people healthy instead of unhealthy, they seem to regard it as a condition preliminarily imposed in the very nature of things, that if the improvement is to cost anything the proposal cannot be entertained! It is enough to say that in such an absurd mode of dealing with such a question the public cannot possibly be imagined to sympathise; and we do not hesitate to go further, and affirm that in nothing whatever that is matter of building, either public or private, is such sympathy really existant. It is foolish architects, we repeat, who persuade people to a parsimony for which there is no need, and which results only in dissatisfaction, and frequently disaster, to all concerned.

No one, of course, will pretend to suppose that all our architects are alike parsimonious. The best, and indeed the shortest, road to professional success and esteem is to practise liberality, and many of them quite understand this. Nevertheless, not only is it the fact that many others proceed upon the contrary principle—that to have a reputation for cheapness secures business—but even the best men are often far too ready to forget that a well-to-do Englishman, when he is spending his money so freely upon the best of everything else, is at least equally desirous of having his house, or his warehouse, or his church, of the same superior quality. That he should have fair value for his outlay, as has already been said, is no doubt his very rational desire, but that the quality should ever be sacrificed is not his desire. The liberality of his expenditure with a builder—often a very flourishing builder in consequence—when there is no architect employed, is of itself a notable proof of this; and his bills for furniture and ornaments, even when he prudently keeps at a distance from CHRISTIE'S, and perhaps refuses on the threshold all temptations to become a "collector" of even the most modest things, are almost more signally so.

To hark back a long way—or in some instances not so long a way after all—let us think for a moment of those architectural works of historical character, which in all the chief seats of culture have been recognised as being amongst the proudest insignia of civilisation. The maxim of a very respectable London architect, which we quoted a short time ago on the occasion of his decease—"to build, not merely strong, but stronger than strong"—is easily understood in its practical application; and may it not be truly said that it is the acceptance of this rule that has given permanence to almost every one of these edifices? To pass over the massive structures of more remote antiquity, where are the Mediæval and Renaissance buildings now which happened to be not built "stronger than strong?" In our own times the science of what is called economy—if the term science had not better be exchanged for some other word—seems to be based upon some simple notion that the "stronger than strong" is in principle a fraud upon the pocket of the proprietor, by which the designer derives a personal profit, to the extent, it is true, of only a shilling in the pound, but so much the worse.

The idea may occur to some readers that the desire "to keep down the expense"—a phrase employed most earnestly by architects all over England every day in the year—has its origin in the consciousness that so much of the detail of academical architecture consists in characteristic ornament of various kinds which the uninitiated do not appreciate, and of which the designer himself, so to speak, derives the sole benefit. So far as any feeling of this kind is actually entertained, either by the architect or by his employer, however vaguely, or even under whatever disguise, it is easy to see that a certain sense of awkwardness must creep into their relations with each other. Probably there are few of us, if any, who are philosophical enough as yet to recognise how much of our designing, if weighed in the strict balance of æsthetic virtue, would be found wanting. The late OWEN JONES, for example, was a man so surfeited with the study of ornament that in his later years he made the attempt to dispense with it altogether; and BURGESS on a memorable occasion, when speaking more thoughtfully than at some other times he did, said plainly, "If I were obliged to choose between the mouldings and the colour, I should keep the colour and sacrifice the mouldings." But, all this admitted, we are still unable to allow that the false economy of the typical architect is accounted for. Not the architectural details alone, but the structural substantiality is too often compromised. Sometimes indeed, even while the æstheticals of a design are successfully smuggled through, it is the thin walls and the weak timbers that allow this to be done, and against a rich altar-piece there has often to be set off a perilous foundation. We refer, of course, to cases of what is called good work, not to buildings palpably scamped; and we need not hesitate to add that in many cases the whole extra cost of the little extra strength in cube walling and cube timber, which, without involving any more workmanship to speak of, would make the building "stronger than strong," would be so small a proportion of the total as to be inconsiderable.

As a principle a judicious Englishman will cheerfully pay for real solidity and durability in all things, and as cheerfully



dispense with ornament. He may be unable to afford the ornament, but he is never unable to afford the substance. Add to this the further consideration which cannot be too urgently repeated—that the difference in cost between a little below the mark which will soon give way and a little above the mark which will last for ages is generally much more trifling than we suppose. Lastly, is there not a beauty in mere strength itself that commends itself to every eye?

## AN ARCHÆOLOGICAL FEAT AT TURIN.

[BY A CORRESPONDENT.]

THE exhibition held this year at Turin is so important in the eyes of Italians that it might perhaps be wished that the neighbouring nations had taken a more sympathetic interest in the event than they have in fact displayed. The show is national, not international, and marks the first pause which the country has made for testing its progress in the arts and industries of modern life. It was for her own sake, and, as it were, before her own tribunal, that Italy made this trial; nevertheless, she wished to display to others what she was bent on proving to herself, but those others have been somewhat inattentive. Perhaps there is not full sympathy yet in the world for the progress of manufactures in a country the purity of whose sky and the picturesqueness of whose peasants are in a sense European possessions. The industries that are smearing coal-smoke over the blue and gold of Italian horizons, and drawing the shepherd and the ploughman off the soil into the crowded alleys of the towns, do not receive enthusiastic applause even from the foreigner who is well content that his own sky should be black and his own cities congested. But though the exhibition is mainly devoted to manufactures and modern industries, it has a very notable section devoted to history and art; and here a memorable work has been achieved in the construction of a castle and village which, unlike such revivals amongst us, are not only the semblance but the reproduction of the ancient forms. The undertaking combined in a remarkable degree historical research with invention; for the architect has not copied entire buildings of the period he had to illustrate—he has done his work according to the strictest authority, but as a sufficiently original architect of that time would have done it; and for this task was needed a considerable assimilative power. Signor D'ANDRADE, who has sacrificed rest and ease and has devoted all his powers to the effort of producing this huge work in the space of two years, is a Portuguese amateur, who has employed the fruits of his enthusiastic studies almost entirely in the service of Italy.

That nation, proverbial with the poets for misfortune, has nevertheless some signal good luck in her history. She has passed, since immemorial times, with no real pause, from one civilisation to another. In no European country has the tradition of art come down with so little intermission. From Etruscan to Roman, with the addition first of Greek and then of Byzantine influences; from Roman to Teutonic, with the modifications that seemed to spring from Lombard soil; from Teutonic to Moorish, art passed on in Italy to the Italian period, with revivals and corruptions, but with no cessation. Such a record could hardly be summarised in an exhibition of modern progress without occupying a space too great for the purpose of the show. Signor D'ANDRADE proposed, therefore, that as the exhibition was to take place upon Piedmontese ground, a specimen of Piedmontese historic art should be produced, and produced completely, in the characteristic form of architecture, and referring to an important period represented by very fragmentary remains—the close of the Middle Ages. Those remains were sufficient for the archæologist to work from, but they made his work necessary inasmuch as they were not sufficient to present any popularly intelligible idea. The year 1400 was chosen. Military and civil architecture were to be specially represented; ecclesiastical forms of the time, having received the attention of students elsewhere, were to be less prominent.

Signor D'ANDRADE has ransacked Piedmont for its antiquities. To know "everything of something" is one of the aims of sincere study, and he has been resolved to know everything of Piedmontese architecture. There is not a hill or a valley, a city or a village of the lovely sub-alpine province that he has not searched; and it is probable that not one old brick has escaped him. And from a field believed to be the

most unpromising in Italy he has gathered enough for the unique reconstruction which stands now upon the borders of the Po.

The village claims notice first, standing as it does at the feet of the castle, which can only be reached through the one gate in its walls, and by its one street. Its fifteen or so buildings form a most picturesque little group; its walls being some grey, some brick, some painted in vivid colours which show brightly against the darker castle walls. The north side, on which stands the gate, is protected by a palisade, moat, and wall. That corner of the wall which is towards the Po bears a round wooden-roofed tower, whence the first resistance would be made to an advancing enemy by the discharge of stones. In the centre of the wall is a square tower, also roofed, and having a turret at the side for the purposes of outlook. This tower has a door which is reached by a drawbridge thrown across the moat. Its face is painted with a decoration imitated from one in existence on the remains of a neighbouring castle. The design is in compartments enclosing a *Madonna receiving the Dove*, the *Angel of the Annunciation*, a *St. George*, a coat-of-arms, and, below these, a hairy demon brandishing a club. With these paintings are the legends—

In mundo spes nulla binis  
Spes nulla salutis  
Sola salus servire Deo  
Sunt cetera fraudes. Ergo nolo.

Si pacem portas licet has tibi tangere portas  
Si bellum geres tristis virtusque recedes.

The peaceful visitor thus welcomed gains immediate entrance to the village "piazzetta," whence the one street winds away on its narrow course. The smallness of the houses and the strength of the grey walls show how little the purposes of home, and how much the purposes of defence, were served by village dwellings of the time. If the women were ever content to abide within these dark doors, the men must certainly have lived outside; and in time of hostilities, when the drawbridge was raised and the one little portcullis lowered, even open-air quarters must have been narrow enough. The Piedmontese villagers seem indeed to have devised jokes, within their restricted space, for the stimulation of the necessary habit of laughter; for the first house is painted over with a curious and elaborate design—*The Dance of Fools*. The "fools" were societies of the sprightlier spirits who, according to a Piedmontese custom, undertook the amusement of town and village communities by organising festivals, ordering games, banquets, and plays of an elaborate character in the cities, and of every degree of simplicity in such a *borgo* as this at Turin. These societies played their part in the little events of private life. At weddings they were particularly active, taking toll of the bride before she was allowed to reach the church, and persecuting those who ventured upon a second marriage by a horrible *charivari*, only to be silenced by a banquet proportionate in liberality to the dowry of the bride. A henpecked husband was the chief victim of the fools, who seized the unhappy citizen, mounted him upon an ass, and led him by force in a grotesque procession. The fools, moreover, had the power of compelling the *facchini* to sweep the piazza before their games, and the stall-keepers to provide material for their feasts. In the painting six figures are shown—men and women alternately—the ladies standing most decorously, each holding a flower, like the queens of a pack of cards, while the men are contorted according to a very Italian idea of humour. Under the richly-decorated portico, formed by the projection of the upper storeys of this house, and supported by massive columns, stand open shops; close by is the public fountain. But the most important house in the village is that of the Pilgrims, standing with ever open doors for the reception of poor travellers to and from Rome and the Holy Land. Such journeys were difficult and dangerous at a time when provinces, cities, and families were divided by Guelph and Ghibelline, and when the lawless class of *fuorusciti* abounded in every district of Italy. For picturesqueness no building in the village surpasses the inn, with its courtyard, its tower, its open pilastered loggia, which collects deep transparent shadows under the projecting roof (then as now used for such domestic processes as require light and air), the groined vaults of the round-arched loggia of its first storey, and the high pointed arches of its portico below. The character of these loggias is altogether special, and has, as its authority, a house at Avigliana, the ancient village which stands guard over the Alpine valley of Susa.



In passing to a minute examination of constructions and of ornament, the visitor who has the benefit of the explanation of those responsible for the authenticity of details, will be convinced that all has been studied with the patience of antiquaries and the delight of artists. From the tiles of the roofs to the pavement of the porticoes and the shops all has been taken from existing models. For instance, in a house which is imitated from one standing at Bussoleno, also in the Val di Susa, the arrangement of the beams of the ceiling with deep recesses between, surrounded by various woods, is quite unique. The hinges and the lintel of the door, the projecting roofs, of the shops outside where the carpenter and the blacksmith are labouring at their trades, prove the minuteness of research. The bricks were made for the purpose according to the manner of making in 1400. And this faithfulness has produced an extraordinary variety in the forms of the arches, rounded or with extremely short lancets; in the windows, simple or divided into four compartments by stone crosses, furnished with glass or "*impannate*" with linen or paper, with iron bars projecting or mortised; ogees of brick or of terracotta, of natural colour or painted, with plain or twisted copings; capitals of brick or stone; sculptured or painted friezes; corbels of strange fashion and curious work; chimneys of all forms; divers coats of arms; iron rings. There is authority, as the architects declare, for every nail. The beautiful façade of the church, with its curious paintings of *St. Christopher*, the *Annunciation*, and a monastic saint holding a hairy devil by an immense chain, has been inspired by the churches of Verzuolo and of Ciriè, while the painted terracotta friezes and the crowning wooden parapet of the neighbouring house are from Cuorgnè. Among the houses which face the Po is one that has its façade crenellated and most elaborately decorated with coats of arms. It is from the river that one of the best views is to be had of the constructions. In many instances a wooden framework was made before the building of the walls, and one of these houses is raised on pillars in order to obtain a level for the ground floor.

Civic architecture in the village has not been studied more carefully than the military and feudal architecture of the castle, which overlooks the *borgo* and the river. This noble construction is intended to represent the dwelling and fortress of a feudatory of the first rank; in the former character it has all the luxury obtainable by a Piedmontese baron in the fifteenth century, and in the latter it stands as an example of a first-class stronghold. A huge mortar protects the northern angle: a round tower is on the south. The castle is surrounded by a moat, over which rise battlements and machicolations for the defence of the garrison by the casting down of stones and boiling liquids.

The only door is in a right angle formed by the junction of two wings, and is reached by the road which climbs from the village and crosses on a drawbridge. This door has pointed arches, and is an admirable work in stone, imitated from the castle of Verrès in the Val d'Aosta. It is closed by a portcullis of prodigious weight, within which a part of the garrison may be stationed, while others are posted at the double machicolations which overlook the drawbridge. If the enemy had succeeded in making an entry before the lowering of the portcullis, he would be narrowly enclosed in a vestibule leading to the door which gives access to the castle courtyard. From this point inwards, the study which has been made of domestic architecture becomes more interesting than that of the defences. The cortile is a reproduction from the castle of Fénis in the Val d'Aosta, and is a trapezium in form, the longest base facing the entrance. A steep semicircular staircase of yellow stone divides into two flights no less steep, which lead to a loggia, and are protected by massive stone parapets. Above the loggia of the first storey is another which runs round three sides of the courtyard, and is upheld by small columns of wood. From the ground floor steps descend to right and left to the underground constructions. The composition of lines is exceedingly felicitous. In decoration this cortile is fantastic. Up to the lower loggia the side walls are painted with a black-and-white rhomboid design, and over the semicircular open stair is a painting of *St. George slaying the Dragon*. Above, on the wall within the lower loggia, is a series of single figures of saints and friars, each bearing a legend in old French, pious or philosophical. High above a principal window are the carved arms of the House of Savoy, painted in brilliant colours; and between this and the door, the arms of the Counts of Challant, who were great lords in the Val d'Aosta and owners of most

of the castles in that region. On either side of these are smaller coats-of-arms, such as those of the Marquises of Monferrato and of Saluzzo, and of the Counts of San Martino and of Manta. The wooden carvings of the pillars of the loggie are of exquisite design and delicacy.

The courtyard communicates with the soldiers' rooms, with the kitchen, and with the baronial dining-hall, which has a ceiling (from a castle in the Canavese), all the wooden partitions of which are painted with elaborate designs, hardly to be discerned in the faint light given by the narrow and deeply splayed windows. No less thorough has been the care bestowed by Professor GILLI upon the furniture. Adjoining is the vast kitchen, with its vaulted ceiling, its spacious hooded fireplace, its well, ovens, dispensaries, and little doors for passing dishes into the hall. The rooms of the first storey open out of the loggia; chief among them are the chapel, which is over the dining-hall, the hall of audience, and the nuptial chamber. Over the vestibule runs a closed gallery, painted in fresco, and ending in the only large window of the castle, through which provisions are lifted in from the valley in time of war. For the chapel and its decorations authority is to be found in the castle of Manta, in the sacristy of a church at Ranverso, and in the choir of San Giovanni at Saluzzo. Its plate and other utensils are real remains of the period. The baronial bedroom is oblong, and hung throughout with old arras, its low wooden ceiling being in square compartments, richly decorated with roses of gilt bronze. The high bed is furnished with steps, which open for the storing of linen. The châtelaine has her little oratory on one side, and the chamber is furnished with praying-chairs.

Perhaps the most lifelike picture is that presented by the soldiers' room, or vast *corpo di guardia*, on the ground-floor, with its two huge, smoke-blackened fireplaces, its hacked and hewn tables, its stands of arms and armour, and its groups of braves casting dice, eating their rough food as they sit on piles of straw, or polishing the rust from their arms. These parts are played by stucco figures clad in costume. In the subterranean vaults are the cellars and the prisons, each fitted with their own suggestive appliances.

A little host of artists and architects have worked under the direction of Signori D'ANDRADE, BRAIDA, PASTORIS, and GILLI; as to the workmen, they were simply ordinary artisans, inspired by the instruction of their employers. "When an Italian workman has a good will," says one of the architects, "anything in the world can be got out of him." In this case his part in the great Turin achievement has been little short of marvellous. No need to say that the castle and village will be permanent; the municipality of the city has already bought them for perpetual preservation.

## REPORT ON WESTMINSTER HALL.

By J. L. PEARSON, R.A.

WESTMINSTER HALL was erected by William Rufus, in 1097, as the nucleus of an extensive palace he proposed building on the site of that probably founded by the Confessor, and enlarged by the Conqueror. Additions, alterations, and surroundings, from time to time, had served by the beginning of this century almost completely to conceal the original work of Rufus. There remained only in 1834 a couple of windows and parts of a string course on the east side to tell of its existence. During the restoration of the north front, when Lewis Cottingham's drawings were made, considerable portions were for a short time uncovered, and again in 1834-35, the whole of the Norman walls were laid bare to be re-cased by Sir Robert Smirke. It has remained for the late removal of the Law Courts on the west side to uncover permanently a large portion of the earliest Norman walls, fortunately in a fairly perfect state of preservation.

The following is a brief list of the various dates when extensive alterations, either in the nature of additions, repairs, or damage took place at the palace, more especially at the hall. These are numbered for further reference, and the information has been verified by original documents as far as possible.

1. William II. (1097).—Foundation, by William Rufus, of the great hall.
2. Henry II. (1163).—Probable repairs and alterations, possibly by Thomas à Becket.
3. Richard I. (1199).—Repairs by Richard I. No traces remain.
4. Henry III. (1217, 1221, 1224).—Throughout Henry III.'s reign extensive works were proceeding at the palace. At the same time the choir, transepts, and Lady Chapel of the Abbey



were being built. Extensive decoration was also in progress. (1244, 1263).—Probable date of the Early English work at the north-west angle of the hall, of which traces are now visible. Fire at the palace.

5. Edward III. (1297 or 99).—Great fire, which reached as far as the Abbey. This indicates that the fire was on the west side of the palace, and, as a consequence, Parliament had to be held at the house of the Archbishop of York, at Westminster. Edward III. built, adjoining the hall, a room for "the hall of the family in Parliament time," from which we gather that the great hall was used in his reign for the sittings of Parliament, and the fact that Parliament had to adjourn after the fire implies that the great hall suffered. In Edward III.'s reign, at the time of the building of St. Stephen's Chapel, reference is made to new work in connection with the hall.

6. Richard II. (1394-97).—It seems from Thomas Walsingham that it was customary for Parliament to sit in the hall in Richard II.'s reign. Whether to repair the damage which may have been caused by the last fire, or to make the hall more suitable as a Parliament House, Richard entirely transformed it to its present shape. The walls were raised 2 feet, and re-cased, and new windows were inserted. The existing roof was added; a new northern porch and towers, and the large buttresses lately uncovered were built. Also "divers lodgings" on the west side; these were mostly contained by a wall erected parallel to the hall, and connecting together the new great buttresses. The two tiers of wall arches between the Norman buttresses were also erected at this period.

7. Richard III. (1484).—Repairs by Richard III. No traces visible.

8. Henry VIII. (1512).—Great fire, which destroyed a large portion of the palace; never rebuilt, and in consequence of which Henry VIII. removed to Whitehall in 1529.

9. Elizabeth (1570).—Large additions to the west side of the hall. A large part of the work built at this date remained until 1822.

10. Charles II. (1680).—Additions by Sir C. Wren.

11. George II. (1732).—Courts of Common Pleas and doorway on west side of hall; also committee-rooms along St. Margaret's Lane; all by William Kent.

12. George III. (1793).—Widening of St. Margaret's Lane, whereby part of Elizabeth's work was demolished.

13. George IV. (1820).—Sir John Soane began work of demolition previous to the erection of his Law Courts.

14. George IV. (1822).—Restoration of north end by Thomas Gayfer, mason to the Abbey of Westminster.

15. William IV. (1834-35).—Re-casing of the walls of great hall by Sir Robert Smirke.

For those whom it may interest, after a description of my plans for the proposed restorations and additions, I will revert to the above works, giving a more detailed account of them and of the traces which now exist.

In making my plans for the reconstruction of the west side of the hall, it has been my object consistently with present requirements to recover the aspect which it presented in Richard II.'s time; also to retain the existing evidences of earlier and later historical work. I, therefore, propose to rebuild the wall between the buttresses in its original position, making an open cloister with a gallery over it extending nearly the whole length of the hall. This cloister will be formed by a series of arches which are not only suggested by the wall arches inside, but by the existing jambs I have found against the large buttresses, and also from the evidences supplied by Capon, from which it is not improbable that this was the original treatment.

The height of this cloister wall is accurately marked by the returns of the parapet on the buttresses, and I have no doubt from the position of these that the parapet was embattled (my reason for this will appear later). Quite apart from the fact that I consider the introduction of this series of arches (forming a cloister), and also the gallery over them, as of great importance to the dignity and effect of the whole building, and that it is, therefore, from a purely architectural point of view, the treatment I would desire to see carried out, I have been to a large extent induced to propose it, and to urge its importance by my desire to further as much as possible the preservation of the most interesting and ancient part of the work which remains to us, namely, the Norman wall of Rufus, lately uncovered, which is the more valuable because it is the only remnant of that early period which now remains exposed throughout the building. Its destruction I should regard as a great loss, but this is assured in a few years, if the wall is to remain unprotected, because its materials are notably unable to resist the attacks of the present London atmosphere. It has suffered already from its present short exposure. I regard the erection of this cloister wall, therefore, as a method of at once preserving this Norman wall and of leaving it exposed to view; one that can satisfy antiquarian sentiment as well as reason. The reconstruction of some of the great buttresses of Richard II. is justified on the strongest grounds, those of stability; they are at present in a most dangerous state, so much so that I cannot remove some of the brickwork which Soane built against and around them, lest they should entirely collapse. It must be borne

in mind that their present state is but little due to the lapse of time, for the most part to injury and defacement of quite modern date.

I would here say that I fully appreciate the value, historical and otherwise, of the effects which time produces on stone, and I would always endeavour to preserve them when possible. But when stonework has been mutilated so as to completely destroy all its features of interest and value as well as these effects of time, it seems more than unreasonable to preserve what are merely evidences of a want of consideration and respect for ancient work.

It would not, I venture to think, be much less than absurd in the present case to retain in their place the bricks, tiles, and plaster with which Soane and Kent, merely to serve the purposes of the modern work they erected, surrounded the buttresses.

(To be continued.)

## BEVERLEY MINSTER.\*

I DO not propose this morning to enter into details of the ancient history of the beautiful building we are now visiting, our time being limited. I shall only mention one or two points that I think may add to the interest of the inspection we are about to make. The church was dedicated to St. John the Evangelist, or St. John the Baptist, and was founded as a monastery early in the eighth century, by John Harpham, fifth Archbishop of York, who is known as St. John of Beverley; he was a saint held in very high estimation; his banner was, on several occasions, carried into Scotland by the kings of England when invading that country, and amongst others was King Athelstan, A.D. 919. They, on their return, as thanksgiving for their success, gave many rich gifts at the shrine of St. John; the latter gave a large sum of money to the church, as well as the gift of Sanctuary, which was enjoyed until the Reformation. A painted tablet, in the south transept, with the figures of St. John and King Athelstan, records this event; a stone chair still remains (which I will point out to you when we go round the church); it is supposed to have been the Fridstool, brought by King Athelstan from Scotland, and any criminal who reached this seat claimed the right of Sanctuary; his life was spared, no matter what had been the nature of his crime; but the remainder of his life was devoted to penance and servitude to the Church. I am told that the only other example in England is at Hexham, but you will remember that yesterday we were shown a seat at Halsham which it was stated was a Sanctuary Chair; and he found that a chapel in this church was dedicated to St. John of Beverley, so that there may be something in the claim.

Considerable importance was attached at all times to the office of Provost of the Minster, and many eminent men have held that office, amongst others St. Thomas à Becket. The church built by St. John and King Athelstan was consumed by fire in 1188, in the last year of the reign of King Henry II., on the night following the Feast of St. Matthew the Apostle (21st Sept.), and upon the site of the ruins of that building the present edifice rose. In reference to the rebuilding of the church I will mention one point which is of importance in helping us to account for some of its peculiar features, viz., that in the year 1311 a writ was issued for the purpose of arresting certain persons who were travelling about the country collecting funds for the building of the Minster, and falsely representing themselves to be messengers from the Chapter of Beverley. This fraud was very successful, and no doubt caused the work to be stopped; also it may account for the omission of a link in the architectural progression of the work, between the severe Early English, as seen in the lancet windows of the choir and transepts, and the rich windows of the north and south aisles, of the nave, of the Decorated period, instead of windows in the Early Decorated or Geometrical style, such as are found in great perfection at Bridlington Priory Church and in Hull. The plan of the fabric consists of a nave with north and south aisles and transepts at the crossing, with east and west aisles; the choir has north and south aisles, transepts, and a small chapel on the north side, built about the year 1490.

The extreme length of the Minster is 332 feet, and the breadth across the transepts and crossings is 167 feet, the height of the vaulting is 65 feet. It would almost seem by looking at the size of the piers at the crossing, that a central tower was intended to have been erected; I do not incline to the opinion that this was the original idea of the builders, but to the theory that the tower or flèche was designed (and in fact partly executed) to rise from the intersection of the eastern transepts, for the following reasons:—You will notice that the piers of these transepts differ considerably from any parts of the remainder of the church, and appear less striking in design, especially the upper portion immediately below the clustered circular shafts. Now if you examine the piers of the larger transepts, you will find that they exactly correspond with the upper portion of the smaller transepts, and I think that these

\* A paper by Mr. F. S. Brodrick, architect, read at the visit of the Lincoln Diocesan and Yorkshire Architectural Societies.



circular shafts originally came down to the floor level, with the idea of their carrying the proposed tower; then, when it was abandoned, they were found to look heavy, and obstructed the view of the east end; the architect, therefore, conceived the plan of cutting them down to open out the arches. I am further confirmed in this opinion, by the fact that above the groining at this intersection on the east side of the west arch, are to be found remains of arcading, similar to that in the transepts, and it is continued round all the sides of the square, as if intended to be visible from the church. Mr. Willis, after an examination with Mr. Petit, has written in some notes of the proceedings of the Archæological Society that he considers the church was originally intended to stop at the intersection of these transepts, and that the arcading was part of the east gable of the church, and was, of course, outside work. I produce an enlargement of his sketch, with an addition of my own in red ink (which was probably not uncovered when Mr. Willis saw it), made after an examination of the work. This addition, and the further fact that the shafts are of Purbeck marble, which would certainly not have been used on the exterior of the building, throws doubt on his view of the matter. The Holy Well is just beneath this intersection, and may have had something to do with the selection of this position for the tower. I throw out these remarks as a suggestion only, and should be glad to hear other opinions on the question. The present tower, or whatever name may be used for it, was erected, together with the vaulting (which you will see differs from the remainder of the church) in the last century; it had a cupola upon it originally, but this was removed in 1824. The earliest portions of the Minster are the transepts and the choir with their aisles; they are of Early English character, date about 1250; the cruciform plan of the choir itself is a feature. The piers of the choir present a very beautiful appearance, suitable to the weight they have to sustain. You will notice the varied effect produced by the introduction of the vertical fillet in some cases, and in others by the shafts being brought to a point.

I would call your special attention to the beautiful triforium, or blind storey, between the arcades and the clerestory. Each bay has four trefoil arches enriched with the tooth ornament resting upon clustered shafts, and touching the wall is a second arcade with pointed arches, the intervening space being filled with a sunk quatrefoil. The architect of the nave admired the triforium to such an extent that, although the work had passed into the Decorated period, he reproduced it without alteration, excepting the omission of Purbeck marble shafts; thus you have the peculiar effect produced, of Early English work surmounting work of the Decorated period, and this has, I believe, caused many learned discussions at different times as to the actual date of this part of the fabric. This triforium differs from the usual form in not having a passage behind it; it is, in fact, simply bare panelling. The easternmost piers of the nave with the arches are Early English, but all those to the westward are Decorated in character; the plan of the piers is the same (again showing the appreciation by the architect of the old work), but the caps and bases vary and foliage is introduced, larger hollows occur in the arches, giving greater light and shade. The clerestory also differs in design, and the ball-flower of the Decorated period replaces the tooth ornament of the Early English style; also the windows have decorated tracery, and are of two lights. The Decorated work extends on the north side as far as the porch, and on the south side as far as the arches of the tower. The tracery in the windows is of flowing character, and particularly rich in design and variety. The lead-work is also worthy of notice. The arcading below the windows is most interesting, as showing examples of the three Periods in which the Minster is built—the Early English at the eastern end, the Decorated following, and finally the Perpendicular of the west end. I think you will agree that the eastern or Early English portion is the most graceful and pleasing in its effect. The Perpendicular work is a bad copy of that of the Decorated period, and the shafts are not of Purbeck marble, but are painted.

The sedilia are worthy of notice, being the only remaining part of the old stalls, and are of the Decorated period. The stalls themselves present an almost unrivalled series of carved misereres; the date is about 1520, it is carved on one of the misereres about the centre, and they would repay a careful examination. I also think that the careful way in which the modern work is combined with old is worthy of much commendation. To give some idea of the enormous foundations required for a church of this description, I may mention that the footings of the nave piers are so large that they almost touch in the centre of the building, and do not leave more than 3 or 4 feet between them. The western towers seem hardly to have been part of the original plan; at all events the Decorated work is continued right up to the present front on the south side, and, in fact, some 3 feet beyond, fragments of which I will point out to you as we go round. The windows of the aisle to the west of the north porch, and the corresponding windows of the north tower, are of Perpendicular work, but strongly tinged with Decorated feeling, as shown by the shafted mullions with their carved caps and moulded bases, and the jambs. The towers will be best understood by an actual inspection, but I may mention that the height to the top of the pinnacles is 180 feet.

## THE SANITARY ARRANGEMENT OF HOUSES IN LONDON DURING THE LAST 120 YEARS.\*

BY FRED. W. HUNT.

THIS subject is one that may be dwelt upon in detail, or by sections, to an extent sufficient to occupy the undivided attention of to-day's meeting, or of several meetings. In the short time, therefore, allotted to its consideration in the proceedings of to-day, I cannot do more than refer in general terms to some of the chief points that have occurred to me.

In speaking of the sanitary arrangements of houses in London during the past 120 years, the points that present themselves for especial consideration are—

1. Drainage and the appliances in connection with it.
2. Water service and its supply and arrangements.

But besides these two subjects, if time allowed, there are further to be considered—

The general arrangement of the houses during that period, and the use of the several parts, and their ventilation. All these being subjects that may be dwelt upon, not only generally but in detail, and also according to the several classes of houses that are to be met with, and are still required, for the wealthy and well-to-do, as for the poorest of the community.

*As to the question of Drainage.*—I must first make some allusion to the general drainage of the Metropolis; for the drainage of houses is dependent upon that of the town in which it is situated.

Before the commencement of this century there was not any system of public or general drainage existing. It is true there were both open and closed "sewers" so-called, but these had been provided for the purpose of carrying off surface water only, or for conducting fouled streams along their old courses. As new squares and streets were laid out and houses erected, sewers were formed under the new roadways, but these were still only for surface water, and it was illegal to conduct any fæcal matter into them. In the formation of these sewers, as they were only for surface water, the questions of a proper fall, or construction with a view to proper cleansing, do not seem to have been considered essential by the engineer or builder. When, after 1815, it was allowed to carry the overflows from cesspools and other foul drains of houses into sewers, the existing sewers, constructed for the purposes before mentioned, were used, and some have continued in use until the present time, being *sometimes* only elongated cesspools with the outfall higher than the upper end.

I should state that the sewers and drainage of the Metropolis had been under the care of the Commissioners of Sewers for the several districts for centuries, and they so continued until the Act 1855, under which the Metropolitan Board of Works was formed. Since that time the general or main sewers have been vested in that Board, while others remain under the care of the several Parish or District Boards.

To come now to our question, which is house drainage. It was necessary, as will be readily seen, under the circumstances above alluded to, viz., that when there were not any sewers for the reception of house drainage, each householder, large or small, had to provide for the reception and storage of all soil or refuse upon his own premises, until it could be removed with as little annoyance to himself or his neighbour as possible. The arrangements of houses therefore in the Metropolis differed but little from those of the country, with the exception that those in town had not the space or accommodation the country afforded for the conveniences required.

Much refuse that is now discharged into the drains was no doubt at first thrown into the streets, but as the regulations forbidding this were enforced, cesspools or cesspits were the means provided for the reception of all soil and sewage matter. These were usually constructed in the yards or gardens of the larger houses, which were provided with one or more privies, frequently arranged so that a common cesspit would answer for them; while for poorer neighbourhoods and courts, one such convenience was provided, to be used in common by the residents of several houses.

House drains, similarly to sewers, were originally constructed to take the waste and surface water, and being for this purpose only, they were not very carefully laid, and were generally square in section, and frequently without any paved bottom. These drains were connected with the sewer if one existed within reach, otherwise they had to go to a cesspool. In houses built after, or only immediately preceding the commencement of this century, when the introduction of a watercloset into houses was becoming general, the drains were made of brick, circular in form, and such as are now called brick barrel drains. These drains were constructed with mortar as a rule, though sometimes a portion of the bottom was laid in cement, and they still discharged into cesspools from which overflows were carried away. No doubt the overflow was frequently connected with the public sewer, but it was not until 1815 that the penalty against such connection was removed.

\* A paper read at the Conference of Architects at the International Health Exhibition.



With this means of overflow, and drainage allowing as it did of the use of a greater quantity of water, and at the same time obviating the necessity for emptying cesspools so frequently, water-closets instead of privies were generally provided for houses built at and after the commencement of this century, not only internally but externally. The difficulty that then presented itself to the builders was the keeping back of foul smells, which was provided against by traps in soil pipes and dip traps at the bottom of pipes, frequently so large that they might be called cesspools.

Previous, therefore, to this century, and for the first quarter of this century, we find a gradual suppression of privies, and the introduction into houses of water-closets, using the old flat bottom drains, or such drains as had been originally laid down, and these discharging into cesspools. It appears to have been considered that a drain would do for any purpose the needs of the occupier might require it to serve, and now all faecal and offensive matter could be washed away out of sight, and traps were supplied to keep back offensive smells, it was sufficient to allow this refuse to find a lodgment in cesspools under the floors of the house, or for that matter on the surface of the ground under the floors. When one cesspool became no longer serviceable, rather than cleanse it a new one was made, and the drain directed to it. The site selected for the new cesspool was one that was convenient for the drain rather than for the health of the house.

I have referred to this as the state of things existing for the first quarter or so of this century; I ought rather to say it is the state of things that came into existence then, and continued for many years afterwards. Subsequently, when sewers were allowed to receive all drainage and refuse from houses, cesspools were no longer constructed, but the old ones were only gradually disused, and a similar influence as before was still at work, for the old drains were retained and diverted only—the cesspools were not removed, they were only disused and left; in fact as little alteration or improvement was made as possible, and frequently that only by the order of the authorities.

It was not until 1847 that compulsory powers were first granted to the Westminster Commissioners of Sewers, enabling them to require all houses to be properly drained into the public sewers, and privies and cesspools no longer constructed or used. These powers were subsequently granted to all Commissioners, but the enforcement of these powers was very gradual, and incomplete houses built before or in the very beginning of this century are still to be met with which present examples more or less of combinations of all the systems named. Old flat bottomed or no bottomed drains still in use, or very imperfect pipe-drains laid in the course of the old drains, with large dip-traps, and water-closets without water laid to them, and cesspools, not used perhaps, but that have never been cleansed or emptied.

About 1850, earthenware pipes came into use for drains, and these, with various improvements in their glazing and manufacture, are to the present time the most approved material used for house drains.

After the introduction of pipes for drainage purposes, the principles observed in the laying and construction of drains continued, however, much the same. The fall of the drains was not improved, and they were laid with very imperfect joints, sometimes not jointed at all. Dip-traps equal to cesspits were still built. Drains were brought into houses and rooms, and connections made there, and the offensiveness arising from the sewers was still overcome by traps and water-seals.

Much has been done during the last few years in advancing sanitary knowledge, and I think I may summarise the principles gradually accepted, and now more generally acted upon as being increased fall to drains, perfect water-tight joints, the abolition of dip-traps, keeping all drains outside the house, disconnecting them from the main sewers, the efficient cleansing of drains and the quick removal from them of all obnoxious matter, the separation of surface and sink and other wastes from soil drains, and a continual free current of air through the drains from near their entrance to the sewers along them and up the soil-pipes.

*As to the Appliances.*—One hundred and twenty years since, water-closets, as such, had scarcely been introduced, though water had been used as an agent for removal of soil; for some accommodation other than commodes, and more private and convenient than outside privies, were demanded by those who could afford to pay for them and their fitting up.

The form of such closet at first in use was no more than a receptacle capable of being washed out, from which a pipe was carried to the drain, having a plug to close the upper end, somewhat like a hopper-pan without a trap. This was fitted up in a cupboard or in a room, where convenient to the occupier, and provided with a seat and lid.

The great difficulties of attending to privies and cesspits to houses built in streets and terraces, and the annoyance from them, led to the great development and the introduction of water-closets and the improvement of the apparatus by various inventors, whose object appears to have been to provide for a regular supply of water for cleansing the pan or receptacle, and the keeping back of foul smells. Many so-called water-closets were, however, only pans, with a trap under, to which water was not laid on, but had

to be supplied by hand; and some of these continue in use to the present day.

Between 1770 and 1780 the first on record of several patents were taken out for an improved apparatus. The earliest were on the principle of a valve closet, but the kind of apparatus known as the pan closet, with a large container, came into use very generally at the commencement of this century. The apparatus of each kind has been improved by various inventors from time to time, and their introduction facilitated, by cheapening the cost of them, as well as by the demand of the occupants. I do not propose to express any opinions as to the best kind of apparatus, but I may say that those which provide for being the most efficiently cleansed by the service of water are now most recommended.

The pipes from the apparatus to the drains have usually been made of lead. Other materials, such as earthenware pipes and iron pipes, have been used, but each of these were found to have faults greater than lead pipes. When it was found necessary to keep back foul smells, D-traps, and traps of various kinds were introduced. These were formed in connection with the pipes, and a dip-trap was built at the bottom of the descending pipe. As offensive smells were more objected to, the traps were increased in number and size, but the gradual acceptance of the principles now acted upon, and referred to above, has gradually led to the abandonment of the dip-traps at the bottom of the pipe altogether, and to constructing one trap near the apparatus, as small as possible, and with earthenware rather than lead or a material subject to corrosion.

*Wastes from Roofs, Sinks, &c.*—At the first, the removal of water from roofs, and of surface-water, appears to have been quite natural. It was conducted into the water-channels in the streets, or by drains, into the sewer under the street, and it was only after the discharge of the foul sewage into the drains that any special care and precautions were felt necessary. The method adopted was again the same as above alluded to, viz., dip-traps were built and water-seals depended upon, and then the same descending pipe, as well as the same drains, were used for wastes of all kinds. This continued to be the principle of the system followed until very recently, and is still followed more frequently than may be generally supposed, instead of the separation of the waste from the soil-drains now recommended.

*Baths.*—These are fittings that were a luxury scarcely known before this century. They were very little used even some thirty years ago, but they are to be met with now in new houses of 30% per annum or under. Lavatories are also quite a recent addition to the accommodation of private houses, and sinks for various purposes have been added almost without limit.

*Water Supply.*—The City, which doubtless had suffered for generations from the pollution of all springs and wells by percolation from cesspits, had been supplied more or less with water from outside sources since the fifteenth century; but the new districts around, that had grown up and were rapidly increasing, were not so supplied before this century.

The Lambeth Water Company was incorporated by Act of Parliament in 1785; the Vauxhall Water Company in 1805; the West Middlesex Water Company in 1806; the Kent Water Company in 1809; the Grand Junction Water Company in 1811.

Before the introduction and supply of water by the several companies, the residents were dependent upon the wells in their houses, or upon the parish wells or conduits. The more plentiful supply of water provided by the companies, and the disuse of wells, facilitated the introduction as well as the extended use of the apparatus for the water-closets, and later on of baths and lavatories.

The water supply to house was generally to one or more cisterns in the basement, according to the size of the house, one being placed in the front area; and when there was a second, it was placed at the back part of the house. At first as the facility for a high service was very restricted, and the cost great, it was seldom used. A small cistern was afterwards placed over the water-closet as such an addition was made to the houses, and the water companies were able to give a higher service.

The service in the house at first was by a tap in the side of the cistern, but it was soon extended to the sinks for convenience. The wastes from the cistern was generally by a trumpet-mouthed waste led direct to the drain, or to the trap under the water-closet apparatus, as the case might be, without any further trap or disconnection, and the supply was taken from the same cistern for all purposes.

For houses of a poorer class the supply was to one cistern only, or to one for several houses in a court, frequently situated near, if not over, the water-closet in the yard that it had to serve, and one tap was attached to this cistern as a draw-off for all other purposes.

The stable-buildings were at first supplied by means of a tank under the floor of the coach-house, which served not only stable purposes, but the family resident in the stable; subsequently a small cistern was added, at a higher level, to supply the water-closet apparatus and the residents.

*As to the Arrangement in Houses.*—When water-closet appliances first were introduced they were required as much, if not more, for houses already built as for new houses. Such an addition to



a house would appear to have been regarded as not more offensive or dangerous to the health of the occupants than the use of a commode, for which they were introduced as a substitute; and accordingly we find the water-closet was erected in a bedroom or in a position nearest and most convenient of access from the family rooms. The necessity for external ventilation or even light was not felt, or it would surely have been supplied.

The general position for the water-closet in the earliest days of its introduction was designedly in the centre of the house, near the best bedrooms, and where the descending pipes conveying the rain water from the roof was available for use as a soil pipe. Light and ventilation there was none, except by a fanlight or small window on to the staircase. Water-closets continued to be placed in this position until near 1850, and in large houses there were two or more so placed on the different floors of the house, and some that could have been as readily lighted and ventilated from the outside were not. The position of the water-closet for the use of the servants, and those in houses of the middle and lower classes, was frequently in the front vault, equally without light.

Houses formerly occupied by single families of the middle classes, but since gradually becoming occupied by a family in each room, have remained without any improvement in this respect. They are still only provided with one water-closet, with a hopper basin and a defective supply of water, placed in a vault in perfect darkness, and where cleanliness is really a difficulty to attain.

This necessary accommodation in houses of more recent erection, is always placed next an outer wall, with better means both of lighting and ventilating, though still in many cases it would seem as if there was a fear of admitting too much light or air.

Baths and additional cisterns and water services and sinks have been gradually added to houses, until at last they are almost without limit. At first baths were placed in bedrooms, but they are now more usually placed in a separate room. Sinks and safes under baths, &c., had their wastes taken to drains or soil pipes, but now they are made to discharge separately.

*Ventilation.*—I would make a few remarks upon this subject. In houses built about 120 years since and later, the reception-rooms in large houses, and even generally, do not call for any special remark in this respect, but the offices and bedrooms were arranged rather to give the greatest accommodation than the best.

Borrowed light and borrowed ventilation was not considered to be undesirable, and the height and dimensions of the sleeping-rooms generally were of the smallest dimensions. With a height of 14 feet for reception-rooms, a height of 9 feet often sufficed for best bedrooms, and of 7 feet for the upper bedrooms, while the upper sashes were frequently fixed. The changes adopted have gradually been to make all sleeping rooms higher, and give them all direct external light and ventilation, and to add other means of ventilation besides open windows.

As a concluding remark, I would say that the alterations in the sanitary arrangement of houses, during the period I have referred to, have been gradual, and until recently very reluctantly, adopted. It has been, and still is, a difficult matter to persuade people of the necessity of making such alterations to their houses; and some prefer to ignore the fact that their houses are in an unsatisfactory state. There is a very prevalent idea that officers of health and inspectors of nuisances have had all objectionable arrangements done away with, and that no one would think of allowing any such to exist; whereas, I think it is rather a fact that those officers never interfere anywhere until the arrangements have become most defective, and are a serious nuisance felt by all in the neighbourhood, and that they seldom think of inspecting or interfering with the arrangement of houses of the middle and upper classes.

### THAMES COMMUNICATION.

THE Select Committee of the House of Commons have issued the following special report on the proposed Thames subway at Nightingale Lane, and the duplex bridge to the east of the Tower:—

Your Committee were unanimous in their opinion that they could not recommend that the Duplex Bridge Bill should be passed, neither did they feel warranted in recommending the expenditure of 2,000,000*l.* of public money at the Nightingale Lane site, which could at best be regarded as a compromise, and which would have entailed an expenditure of a like amount further to the east.

Your Committee are of opinion that two crossings are immediately required, and should be sanctioned by Parliament. The one a low-level bridge at Little Tower Hill, with two openings, each about 100 feet wide, to be spanned by a pivot-spring bridge. The other a subway at or near Shadwell, which would be central, and would best meet the wants and wishes of the inhabitants east of London Bridge.

So far as a low-level swing-bridge at Little Tower Hill is concerned, much incidental evidence was given which enables your Committee to speak with some authority in its favour.

The approach to that site from the north could be made of sufficient width by a very slight concession on the part of the

War Office, and thus the heavy expense of purchasing any portion of the costly warehouses of the St. Katharine's Dock Company could be avoided without unduly trenching on the precincts of the Tower, while upon the south side there appears to be no property of very great value in the line of the proposed bridge.

The question of a swing bridge on the pivot principle, spanning two openings each of about 100 feet width, appears to have been most satisfactorily solved at Newcastle, where such a bridge has been constructed over the River Tyne, and has been proved capable of accommodating satisfactorily both the ship and road traffic. Two vessels arriving from opposite directions can pass such a bridge at one and the same time.

Evidence was given that the time occupied in opening and shutting such a bridge does not exceed three minutes.

Your Committee are also of opinion that this arterial communication should be constructed by one of the two great public bodies of London, either the Corporation or the Metropolitan Board of Works, and not by a private company.

It appears from a letter of the Chamberlain to the Remembrancer of the City, dated June 28, 1884, that the condition of the Bridge House Estate Fund is now such as to warrant a sum of 750,000*l.* being raised, and that a sinking fund could be created which would pay off this and the existing debt in thirty-five years.

This sum would probably suffice for the construction of such a bridge as your Committee have suggested, with adequate approaches; and your Committee cannot avoid expressing a hope that the Corporation of the City of London may be induced to undertake this great and useful work contemporaneously with the construction of a subway at Shadwell by the Metropolitan Board of Works.

### ASSOCIATION OF MUNICIPAL AND SANITARY ENGINEERS.

THE annual meeting of the Association of Municipal and Sanitary Engineers and Surveyors was held last week at Newcastle-on-Tyne. An address was delivered by the president for the year, Mr. W. T. Laws, the engineer of the city. In the course of it he said that healthy dwellings for ourselves, in which hygienic laws shall not be set at defiance, is a subject upon which science, experience, and skill are ever at work, and in which individual needs will always be supplied by individual effort. Healthy dwellings for our artisans and labouring classes is a much more pressing question, which is taxing and will tax the utmost effort both of local and Imperial legislation. It is a question which civilisation has begotten, and which civilisation itself has rendered more and more difficult. Civilisation has crowded man into limited spaces by enabling him to have his food supplies brought to him on the spot where he finds the readiest market for his labour. But for the modern facilities for transport given by improved roads, by steamships, and railways, such towns as London, Glasgow, Liverpool, and many others could not exist for a month. No one who witnessed the effect of the great snowstorm of 1880-81 in London could help speculating on the critical nature of its position had the block to transport continued even for a fortnight instead of a few days. A population of four millions means a daily consumption of 5,000 tons of foodstuffs and the daily removal of 70,000 tons of liquid and solid refuse through the sewers. A month's stoppage of the supplies would mean starvation to thousands; a week's stoppage of the sewers would mean disease and death to thousands also. So that civilisation, while it has enabled men to live together in much greater numbers, has also rendered their position infinitely more critical, and necessitated special provisions for their comfort and safety as a community. And it has also led to the great problem of how to house the labouring classes. Space in the centre of London has become so valuable for manufacturing and business purposes that it is too dear to live upon, and the living links in the great machine, the flesh and blood without which manufactures and business must cease altogether, are driven to herd together in slums that are unfit for human beings to exist in; or they must migrate beyond that wide belt of middle-class dwellings which forms Greater London, and add to their daily toil a weary journey morning and night. This is a problem the solution of which calls for wisdom in deliberation and skill in administration. In all these problems, gentlemen, we municipal and sanitary engineers are called upon by our position as advisers and executive officers to take no small part. Every one of us has some share in one or more of them, and is, or may be, called on to-morrow, if not to-day, to task his brains to advise upon, and his energies to carry out, some part of them. And this it is that make the value of such an association as ours, and of such meetings as this where we can discuss the sanitary problems of the day, and compare and exchange our experiences. Sanitary progress is aided by our discussions, methods that have been successful are explained and made generally known, and, what is equally important, failures are published, their causes investigated, and similar mistakes guarded against in other places.



## NOTES AND COMMENTS.

QUESTIONS have been asked in the House of Commons respecting the delay in commencing the works of the Science and Art Museum in Dublin. It was implied by one of the Irish members that there was only a trifling difference between the estimates of Messrs. DEANE & SON and of the Government surveyor. In reply, Mr. COURTNEY was compelled to confess that the difference was not slight, and it was added that it would be entirely unjust to the other architects to proceed with the design recommended by the Committee without inquiring into the probable cost of their designs also. The amount of the difference between the two estimates has not been announced; but it must be the reverse of trifling, otherwise the Government, out of sheer weariness of the trouble connected with this scheme, were likely to have given orders to start the works. If it is established that the recommended design is much more expensive than the authors stated, it is the bounden duty of the Government to reconsider the report. We do not suppose for a moment that Messrs. DEANE knowingly produced a design that was incompatible with the conditions, but everyone who has had to do with modern competitions is aware that there are architects who consider it to be a diplomatic feat to send in designs which disregard the stipulated cost, believing that diplomacy will still befriend them when the builders' estimates appear. This is a practice which should be treated without mercy, and there are assessors who wisely make cost the first condition in examining designs, and set aside every drawing, however beautiful, which appears to exceed the limit. If the Government will insist on right being done in Dublin, their action will have a beneficial influence hereafter on public and private competitions. The erection of the building may in consequence be delayed for a month or two; but it should be remembered that if it were not for the clamour which was raised in Ireland when an English design was preferred, the walls of the museum might by this time have attained a good height.

WE have not space this week to print more than a part of the careful report by Mr. PEARSON, R.A., on the proposed alterations at Westminster. The works which are contemplated will cost 35,300*l.*, and come under three heads. First, an open cloister extending nearly the whole length of the Hall, and comprising the restoration of the buttresses and the west side of the Hall. The latter work will involve the removal of the already worn and dilapidated casing of the upper part, which was added by Sir ROBERT SMIRKE in 1834-35, and the substitution of masonry well bonded into the Norman core. The second will be the completion of Sir CHARLES BARRY'S work on the north side of St. Stephen's Porch, "in such a manner as he himself would have desired to have seen it completed under present circumstances." The third work will be the alteration and raising of the two towers at the north end of the Hall, which, although demanded by the extreme ungainliness of the existing front, must be conjectural, as there is no record to guide the architect as to their original condition. Mr. PEARSON proposes to alter the windows and raise the towers one stage. The difficulty of the task is apparent. Mr. PEARSON is the most conservative of restorers, and we fear he runs the risk, by his extreme care and reverence, of giving dissatisfaction to all but the judicious.

THE report of the Old Mortality Society states that in the following instances the advice of the Council has been obtained:—The preservation and restoration of Lord DACRE'S tomb in Saxton churchyard accomplished; tracing the representatives of MORANT, the Essex historian, and renovation, it is believed, of his tomb at Aldham; the replacement of Dean CANNON'S mural monument in Westminster Abbey; the preservation of the great Countess of CUMBERLAND'S tomb in the church of St. Lawrence at Appleby. Steps are in progress for the recovery and preservation of the ALINGTON monument (1626) at Mildenhall; the preservation from absolute decay of the DEANE monuments (1634)—fine works of art—at Great Maplestead. The Council desire to take action for the safety of the DE LA BECHE effigies (fourteenth century) at Aldworth; the preservation of the BARNEWELL tomb (1589) in Lusk churchyard, Ireland, and to aid in the recovery of the CULPEPER monument (1604) at Feckenham. The illegal removal of memorial slabs from churches is a great evil; an important case at Milford, Hants, will probably be tested. In

Paddington Churchyard the memorials to Mrs. SIDDONS, BANKS, NOLLEKENS, and HAYDON will in due course receive the attention they deserve and require. The Society has about 600 members.

THERE is a passage in the report of the Commissioners of Public Works in Ireland which suggests that as yet there has been no selection of a design for the Dublin Museum. It says:—"In response to the invitation issued by the Board, thirty-two sketch designs were sent in, which, having been referred to the committee of selection appointed by your lordships, five were selected therefrom in accordance with the terms of the competition, and the authors of these designs having submitted matured drawings for further critical examination, they were referred to the committee, whose report thereon is at present under your lordships' consideration." The report is dated May 31, 1884, and the inference to be derived from it is that there was nothing approaching a decision at the end of May. The announcement of the result of the competition in the Dublin newspapers was rather premature.

THE Conference on Water Supply by the Society of Arts, will be held at the Health Exhibition on Thursday and Friday in next week. The Conference will meet each day at 11 A.M., and will sit till 1.30, then adjourn till 2, and sit again till 5 P.M. The proceedings will be opened on Thursday, at 11, by the Chairman. The papers and discussions will be arranged under the following heads:—1. Sources of Supply. 2. Quality of Water; Filtration and Softening. 3. Methods of Distribution; modes of giving pressure; house fittings; discovery and prevention of waste, &c., &c. The proceedings will be continued on Friday, and if necessary on Saturday. The readers of papers will be restricted to twenty-five minutes. Speakers will be restricted to ten minutes. The papers to be read will, in most instances, be printed and distributed in the room. Members desiring to attend the Conference will be furnished with tickets admitting to the Exhibition and to the Conference room, on application to the Secretary of the Society of Arts, John Street, Adelphi.

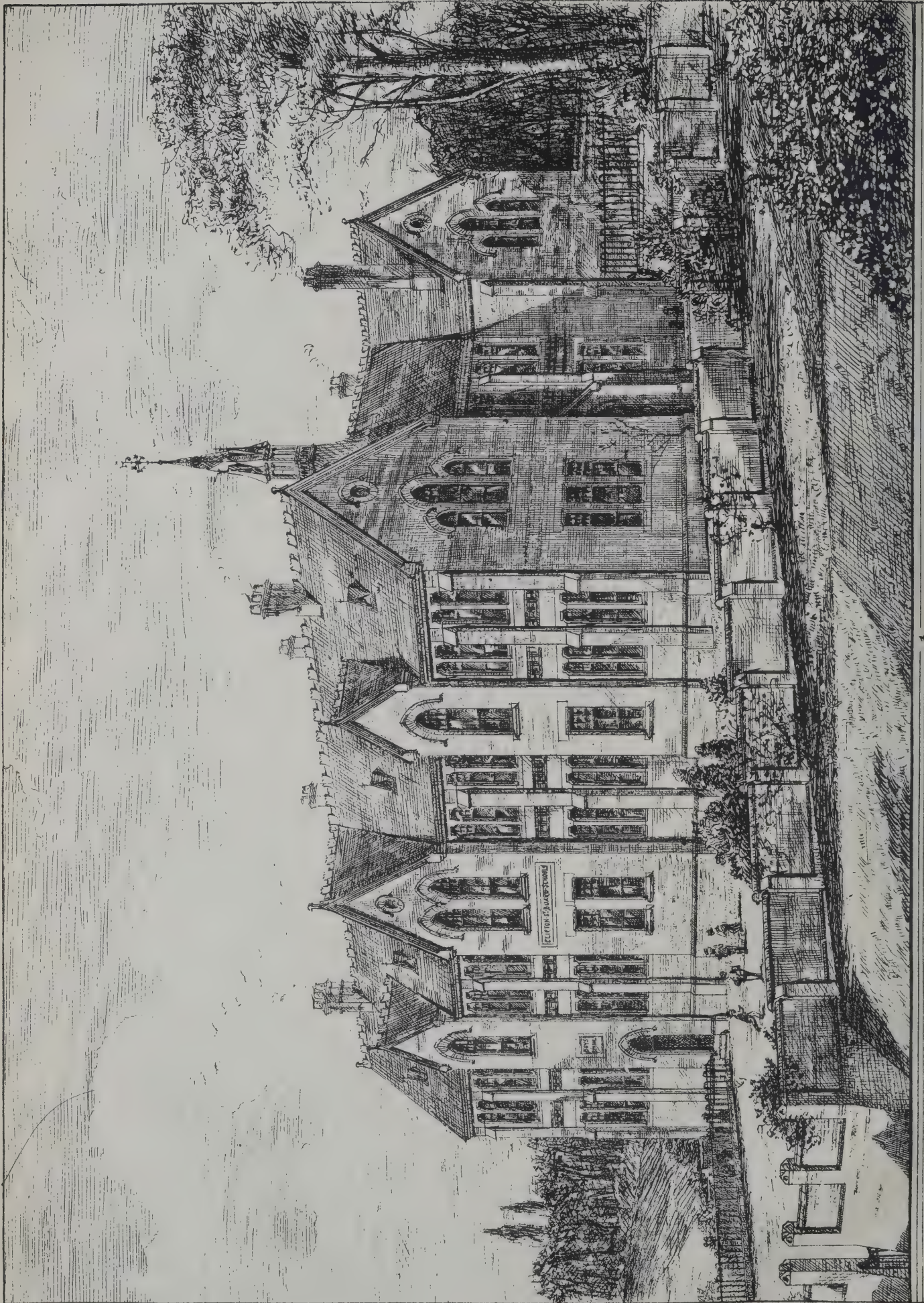
THE Commissioners of Public Works in Ireland have during the past year sanctioned loans for the erection of labourers' dwellings, which amount to 40,052*l.*, or nearly double the amount lent in the year before. The loans for sanitary purposes amount to 188,035*l.*, and the total advances under the Act now amount to 949,619*l.* There has been a large demand, which is still increasing, for grants towards erecting new schools, and, though no expense is sanctioned in the erection of these schools but that which is necessary to secure sound construction and efficiency in working, the large number of cases involves a very considerable annual outlay. The great increase in the last few years is attributable to the removal of opposition to the placing of the schools under the National Education Board, and the extension of the system to remote districts. During the past year the Commissioners of National Education have notified grants in aid of building fifty-five new schools, and of structural alterations and improvements at forty-two others, and a considerable amount of work, for which grants were made in former years, has been carried out.

THE Council of the National Smoke Abatement Institution are able to report that satisfactory and encouraging progress has been made during the past year. Some of the largest bakeries have adopted the improved gas-heated and other modified furnaces, and are now working without producing any smoke whatever, and producing results eminently satisfactory. Gas engines, which are now used in various trades, have, in the case of engines up to 20-horse power, frequently proved themselves more economical than steam, as well as being completely free from smoke. The use of smokeless coal and coke for heating purposes, both domestic and industrial, has increased considerably during the past year, and the system of heating houses uniformly by hot-water pipes has also increased as the direct result of the improvement made in the apparatus. From the communications received from many places abroad as well as from all parts of the United Kingdom, the council are satisfied that the desire to abate the smoke of towns is fast increasing, and that the means of accomplishing that object have generally improved in kind and increased in variety.







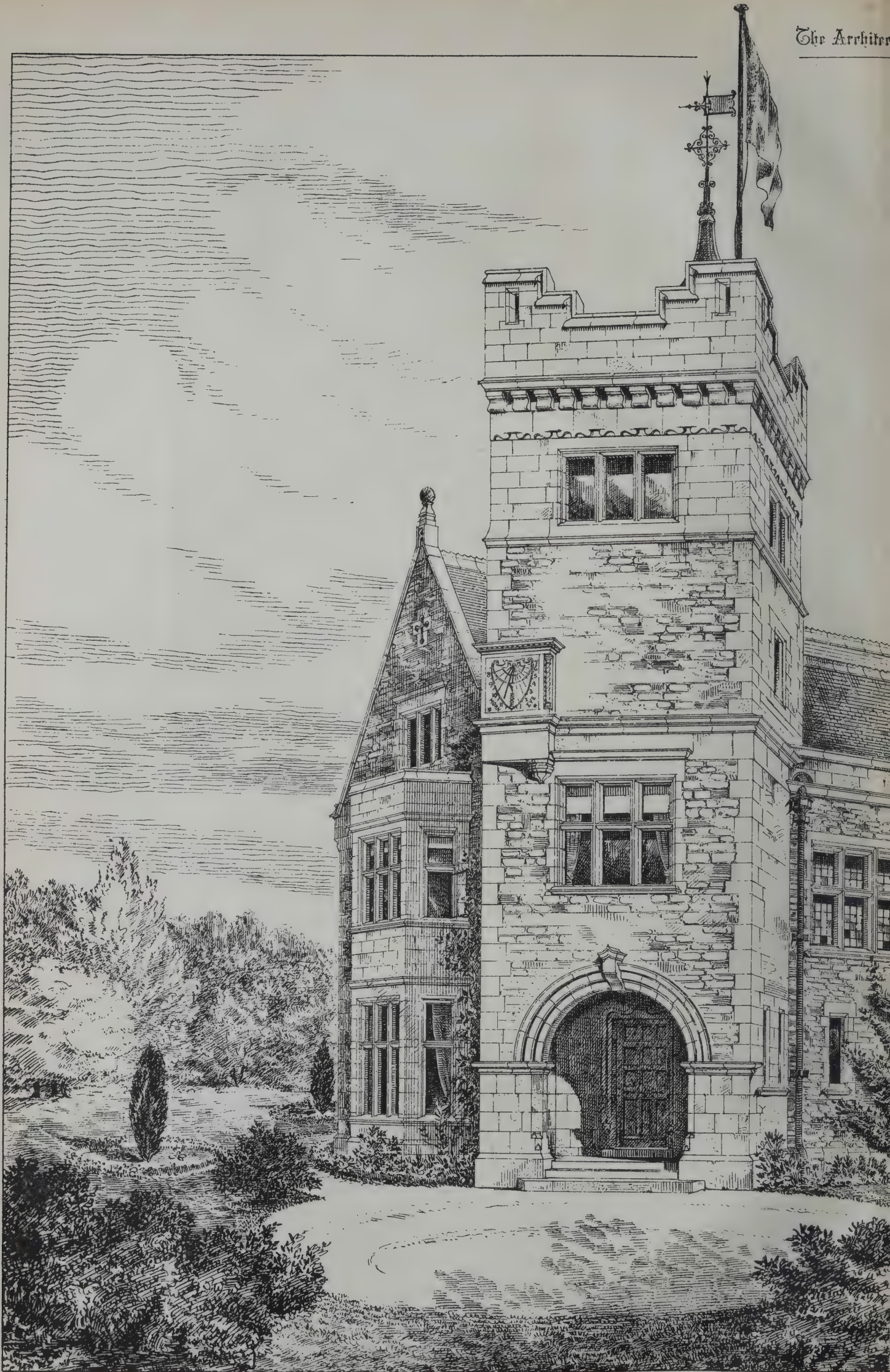


~ SWINDON-SCHOOL-BOARD - CLIFTON - S<sup>r</sup> SCHOOLS ~ W·H·READ·ARCHITECT ~



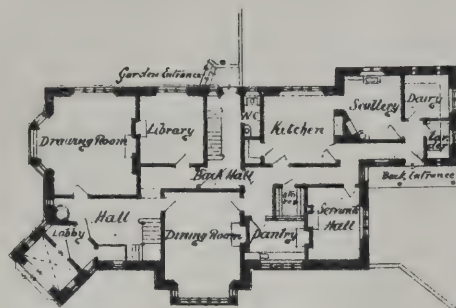




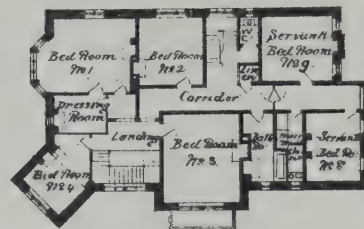


PEMBURY END,  
HENRY CURZON





*Ground plan*



*Chamber plan*

Scale 10 5 0 10 20 30 40 50 60 70 80 90 100 feet















"INK-PHOTO," SPRAGUE & CO., LONDON.

NEW PREMISES, DALE ST. &

OLIVER ESS



Aug 19<sup>th</sup> 1884.



JAMES WATT ST., BIRMINGHAM.

ARCHITECT.









BREDA.

DRAWN BY R. M. ROE.







## ILLUSTRATIONS.

PEMBURY END, TUNBRIDGE WELLS.

THE house which is a subject of illustration this week forms, with the stables and other erections and the entrance lodge, a group of buildings just approaching completion on a site having an area of about thirteen acres. It was the aim of the architect to produce a compact plan, and a good deal of care was taken, as will be apparent to architects on examination of the arrangements shown on the plan accompanying the illustration. The appellation given above may not be permanent, but it was found a convenient one during construction as indicating the locality, which is quite on the outskirts of Tunbridge Wells, and near the village of Pembury on the borderland of Kent and Sussex.

The style may be called Jacobean, and the material used is stone, the mullioned windows and copings being of Monk's Park Bath, and the walling generally, and a great part of the masonry being of local ferruginous sandstone, got from the deep beds of a quarry in the neighbourhood. The remarkable durability of this stone is evinced by a study of the thirteenth-century work of Tunbridge Castle and Bayham Abbey buildings, at the extreme ends of the district. In the latter building, now a ruin, the mouldings are exceedingly delicate, and the arrises still remain quite sharp-edged. The inner part of the walls is built of impervious bricks.

The tower, which becomes important in the view selected, was not part of the original design; but as the site is considerably elevated above its surroundings, and is 500 feet above the sea level, there was a strong desire to command a view of the surrounding panorama. The approach to the summit is by means of an easy circular stair, and the high parapets at each angle, with their glazed loopholes, serve as wind-guards for those who may like to sit and gaze on the spreading landscapes of Kent on the north and Sussex on the south.

The entrance archway face of the tower is nearly south, and the sun-dial is made to incline towards the west to catch the



rays which mark the later hours of the day. The dial with its gnomon was calculated and set out by the architect by the use of the terrestrial globe.

Messrs. COWLAND & Co., Portland Works, Notting Hill, and Queen's Road, Bayswater, were the contractors for the work, and a great degree of assiduous personal supervision was given to the work by Mr. C. D. COWLAND, the head of the firm, to whose energy at the quarry, and on the works, is greatly due the fact that the whole has been completed in the space of one year.

The perspective drawing was made by Mr. THOS. GARRATT, under Mr. CURZON's directions, and it may be worth while to point out that an experiment in the perspective of the tower has been introduced to meet an inevitable presentment, and, accordingly, in the drawing the tower diminishes upwards, which is not the case in reality.

SHOPS, ETC., DALE END AND JAMES WATT STREET BIRMINGHAM

THIS block of buildings is now in course of erection for Mr. ALFRED HUMPAGE, and provides premises for a tavern, commencing with the circular corner and extending up James Watt Street, and also for five shops and dwelling-houses in Dale End. The elevations will be executed with best red brick, with moulded and carved brickwork, and with Round Oak stone dressings. The shop fronts, bay windows, &c., are of wood, and will be painted and decorated. The roofs, top of bay windows, and top of shop front, will be covered with brindled tiles.

Mr. THOMAS GOUGH is erecting the buildings from designs by Mr. OLIVER ESSEX, A.R.I.B.A., of Birmingham, at a cost of about 5,000*l*.

CLIFTON STREET BOARD SCHOOLS, SWINDON.

THE design which we publish this week was selected in an open competition in which forty-six architects took part. The walls are of brick with stone dressings. The schools will provide accommodation for 600 children.

The contract has been let to Mr. BARRETT, builder, of Swindon. The architect of the buildings is Mr. W. H. READ, also of Swindon.

SKETCH IN BREDA.

THIS illustration, from a drawing by Mr. R. M. ROE, shows the great church and the most picturesque part of Breda in Holland.

## ARCHITECTS' CONFERENCE AT THE HEALTH EXHIBITION.

THE Conference of Architects met a second time on Friday, the 11th inst., Mr. J. Godwin in the chair, when papers were read as follows: by Mr. E. C. Robins, F.S.A., on "The Impermeable Construction of Roofs, Walls, and Basement Floors, with a Reference to Ventilation and Warming incidental thereto"; by Mr. J. P. Seddon on "The Construction of Chimneys." Mr. C. Forster Hayward, F.S.A., opened the discussion, on the termination of which Mr. Horace Jones read a paper entitled, "A Suggestion with regard to the Construction of Doors so as to afford opportunity of escape from Fire;" and another on "An economical mode of Fireproof Construction adopted in several instances in Public and Private Buildings."

The closing meeting of the Conference took place on Saturday, the 12th inst., Mr. Beresford Hope, M.P., presiding. Papers were read by Mr. George Aitchison, A.R.A., on "The Sanitary Aspect of Internal Fittings and Decoration;" by Mr. Wm. White, F.S.A., on "The Hygienic Value of Colour;" and by Mr. F. H. Watson on "The Collection, Storage, Management, and Distribution of Water, for Domestic Purposes, within the House."

A report of the proceedings will appear in next week's issue.

## DR. SCHLIEMANN'S DISCOVERY AT TIRYNS.

A CORRESPONDENT of the *Manchester Guardian* writes:—

Since I was able to make an early communication to you on Dr. Schliemann's extraordinary discovery of a vast prehistoric palace or castle at Tiryns, in the Peloponnese, fresh facts of great importance have come to light. From further excavations and closer inquiry it appears now that this remarkable building is even older than was thought at first. Its most archaic portions are now assigned to the thirteenth, perhaps even the fourteenth century before our era, whilst the later partly rebuilt portion is attributed to the eighth or seventh century B.C. In this way it would be of even higher antiquity as regards its first foundation than the heroic graves of Mycenæ, with which it was at first held to have been contemporaneous. The vestiges of a terrible fire by which the palace at Tiryns was destroyed are yet visible everywhere. A Viennese archæologist, Dr. Moritz Hoernes, who went to Tiryns with a recommendation to Dr. Schliemann, states that at the door and window openings the stone has been burnt into a chalk-like, the clay into a brick-like, mass. Otherwise the ruins are in a good condition. In that vast conflagration all the numerous wooden doors and roof columns, and the roof itself, disappeared; but the places of the columns are still discernible by slight circular elevations of the floor. From another source we learn that the bases of twenty-seven columns, formed of hard limestone, have been found; also a most ancient Doric capital. Dr. Hoernes reports that near the gate "the Cyclopean circumvallation still overtops the castle, and that there, in the narrowness of the gloomy gateway, the masses of stone, heaped up on all sides, are doubly impressive to the eye. At this place the onlooker gets a truly overpowering sensation of the whole prehistoric settlement. A feeling is created that we are



here on the threshold of an architectural development which forms a transition to the Lion Gate of Mycenæ, so that the latter archaic work, though it gives rise to such wonderment, already appears to be something more recent and more refined." Near the threshold of each room, Dr. Hoernes continues, the bases of two columns as well as the faucet holes of the folding doors, are still to be observed, both columns and doors having been of wood. In a large ante-room there is a square structure, to which steps lead up from the door. Dr. Schliemann holds it to be an altar of the house-protecting chief deity (Zeus Herkeios), in accordance with the custom mentioned in Homer. A great many walls, divided by intervening walls, evidently formed at first a single hall—a throne-room, as the phrase would be now. In the centre of this splendid room there is a large circular cut in the floor, with four bases of columns set in a square. Dr. Hoernes considers it a "mysterious contrivance." May it not have been a seat for a king, or a receptacle of house-gods? Under the western wing of the hall there is a bath-room, proved to be such by a large stone slab at the bottom, and by a still well-preserved waste-pipe. Whatever remnants there are of wall paintings are very fresh in colour, of strikingly bright and gay tints. From a communication made by Dr. Schliemann to the Anthropological Society at Berlin, we gather that the colours used are black, red, blue, yellow, and white. One of the wall paintings, according to Dr. Hoernes, represents a bull in full career. On its back a small nude male figure is to be seen, agitating itself in curious fashion as if engaged in some acrobatic performance. The proportions of the bull are faultlessly rendered, the details given with naturalistic fidelity; the movement of the human figure is most exaggerated, almost as if it were on the wing. The background is dark red; the bull yellow; the human figure white. Seeing how exceedingly rare any mural paintings of Greece are, these archaic pictures are of incalculable value. A mass of pottery and terra-cotta figures, many of them of extraordinary freshness, were contained in a large number of baskets when Dr. Hoernes recently inspected the ruins. He also mentions some slabs of alabaster, with relief sculptures—sparse remnants of a once splendid inner decoration of the rooms. Many knives of obsidian, and rudely-formed hammers of diorite and speckled marble have been found; little metal, no iron, but a great deal of lead. Of interest also is the discovery of charred grains which, after a close investigation by Prof. Wittmack, have been recognised as the remnants of grapes. At the foot of the rock on which the castle stands Dr. Schliemann has discovered Cyclopean house walls. Here there must once have been the dwelling-places of a rural population, "seeking shelter under the castle like a herd near the herdsman," to use the words of Dr. Hoernes. Besides these pre-historic discoveries, Dr. Schliemann found the ruins of a Christian church from Byzantine times—probably from the sixth century. Within and without it many graves have been opened, the contents of which promise important results for ethnology, skulls and bones from that century being as yet exceedingly rare.

## DRAINAGE UNDER DWELLINGS.\*

BY S. FLINT CLARKSON.

SOME very simple things may be said naturally, if addressed to a resident in a good-sized house in a large British town, who wishes to learn how the appliances for drainage, shown in this exhibition, are used. It will be easy to begin at the beginning in everything; and pleasant to fancy that he begins to learn now, because he has not been to an International Health Exhibition before, and not because he is dense or heedless. Usually bitter experience has taught the well-to-do householder some lessons; people who have suffered in health, purse, and temper by bad drainage do not need much looking for. In the next generation we hope some searching out will be necessary. What is being done now is not all perfect, either in system or execution, but it may fairly be assumed that the best work of the present time will pass muster well for many years.

However desirable it would be to avoid drains under dwellings altogether, back drainage is impossible very frequently for terrace houses—those houses put close together, which will always line streets in the central portions of our towns. The sewers are in the streets, and the water-closets and sinks are where they must be, or where they happen to have settled themselves—most often at the back. Anything which is desirable for other drains, in less important places, may be considered absolutely necessary for those under dwellings, which should, of course, be as near perfection as possible.

1. *What to avoid.*—By pointing out briefly the bad qualities of brick drains, such as used to carry away the refuse matters from dwellings, what are good qualities in drains generally may be perceived without an effort. New brick drains are rarely constructed nowadays, but plenty still exist under and round about houses; so that they are not as yet mere matters of antiquarian interest. We will hope that all here will live to see a bit of the

last example put into a museum. The special sub-committee who have devised the insanitary house in the central avenue have judiciously decided to show only the usual defects, not exaggerating the ordinary conditions. A special pamphlet and a good show of special labels and diagrams will help—almost force—everyone to see those defects. If they had exposed to reprobation anything practically obsolete, for the sake of the effective contrast of a very bad system, very badly carried out, with a good system, they would—doing it on such a scale and in such a permanent form—have been inartistic. For showing up persons or things with much effect human nature insists upon the facts of the current hour being kept to very closely, and rebels if there is a call to hear of, or look twice into, an offence not committed yesterday or to-day. In a slight address, in which brevity is all-important, an awful warning is less out of place.

In brick drains (and in drains of rubble stone equally) the materials were porous—absorbing liquid foulness, and giving it out in foul air when stirred, half dry, or dry. The bottoms were too frequently of bricks laid flat in mortar; the bricks grew loose, and the bed of the channel became a row of little cesspits. In true barrel-drains the round bottom was usually covered with cement, but it was applied with difficulty, and frequently not very smooth. With any slight disturbances the coating cracked, parts peeled off without anybody knowing where—renewal was out of the question. There were thus always little pools above the porous bricks. Rats worked their way between flat covers and side walls, or enlarged any crack in a barrel. The bad air in the drain found its way into the building, and the rats too. With bricks, barrels were not made less than nine inches diameter, which we know is too large for an ordinary house-drain. Little streams of water turned through large flat-bottomed drains were shallow and slow; and in nine-inch barrels, with rough insides, there was but little improvement. The solid matter was left behind by the liquids; flushing applied with the most extreme rigour could not cleanse such drains. They were (1) of porous materials; (2) not smooth inside; (3) with joints too frequent, and soon becoming imperfect; (4) too large; (5) difficult to cleanse.

No intelligent and careful use of the materials could get rid of most of these defects. The drains were, however, frequently laid with very little fall, (6) and this might have been different. But fall was often not easily got; at the upper end the top of the drain was quite close to the surface, and the whole fall in 90 or 100 feet was next to nothing, varied by falls the wrong way. No swift rush of water seeking a lower level took place, and the drains became in time long cesspools. They were also (7) often in direct communication with the common sewer, without the interposition of a trap; there was then a constant supply of foul air from foul sewers to the house drains. The drains were not ventilated (8). Perhaps a dip trap of brick and stone—a little cesspool in itself—tried to cut off the direct connection with the sewer; but in all the pipes discharging into the house drains, there were water traps and no open ends—no induct or exhaust pipe. The drains were left to themselves with the utmost determination, and a faint hope that they would behave themselves decently. No attempt was made to change the air in them by passing fresh currents through. The foul air took its own course. Holes were eaten in lead pipes and traps, and vents made; and rushes of air took place at open joints, at imperfectly trapped sinks, and whenever waterclosets were flushed.

2. *Stoneware Drains.*—With a good system of drainage, everything generated in the house of an offensive and injurious character will be removed as fast as it is produced, and the drains will be watertight, clean, and full of fresh air. All the eight defects noted above may be avoided if good stoneware pipes are used as they should be. They are manufactured in many places in the United Kingdom and are not expensive, not nearly so costly as brick drains cemented inside would be. Well-burnt, hard, glazed stoneware pipes absorb no moisture; the vitrified glaze renders them as non-porous (1) as an old-fashioned brown drinking-mug; they do not corrode; they are quite smooth inside (2); once well cleansed the surface is what it was at first.

The fewer the joints the more perfect the drain. If one could be put down all in one piece we should do well, but nature has apparently not arranged for this. In the stoneware drains joints occur at every two feet, and if properly made they are very lasting (3). [These numbers are those of the defects in the brick drains noted above; the contrast is thus pointed out, and the way in which a defect is overcome.] The length of 2 feet is convenient for making, firing, conveying, and handling. A length of 4-inch pipe weighs about 15 lbs., and a length of 6-inch about 26 lbs. In each batch of pipes there are failures which must be cast aside; they should never be sent out from the works. They may be of insufficient thickness, rough on their surfaces, too brittle, fired too much or too little, not truly cylindrical, or otherwise defective in form. The pipes are made thicker as the diameter is increased. A 4-inch pipe is  $\frac{3}{8}$  inch or  $\frac{1}{2}$  inch thick; a 6-inch,  $\frac{3}{8}$  inch; a 12-inch, 1 inch. If too thin or brittle, the broken pipes will saturate the soil around them with foul matter; if rough on the surface, obstructions will occur; in either case the drain will be blocked up. If they are not truly cylindrical in form (or not truly oval in the case of oval pipes), one pipe will stand above another at the joint and

\* A paper read at the Conference of Architects at the International Health Exhibition.



stop the flow. An ordinary pipe is constructed with a projecting rim or socket at one end—a faucet into which the plain end of the next pipe fits as a spigot. The inside of the faucet and the outside of the spigot have parallel grooves to give a key to the material introduced to form the joint.

The lowest pipe is laid first, with the socket at the highest end. The plain end of the next pipe is placed in that socket, and the space between it and the socket is filled in with a mixture of cement and sand. Clay should not be used for drains under dwellings; there the joints should be as air and watertight and as indestructible as possible. Before the cement has had time to harden the interior of the pipe is wiped out very carefully. If this is not thoroughly done, a ridge or small lumps of cement will stick up at the joint. Long hairs, threads, pieces of cloth, or cotton stuff will attach themselves to such projection; soil will then cling, and a stoppage be managed sooner or later. To guard against such ridges or knots, joints have been treated somewhat as in iron water-mains; that is to say, strands of gaskin have been put round the upper pipe, so as to make it fit tightly in the socket, and then cement packing, put to fill up the rest of the socket, cannot reach the interiors of the pipes. Some lodgment results, however, and consequent imperfect cleansing, if the whole space between the two pipes is not solidly filled up with something as hard, or nearly as hard, as the pipes themselves.

A careful and skilful workman, taking a pride in his work, does a good many things and avoids a good many others, in the apparently so simple work of laying a pipe-drain. An unfitted joint, or one imperfectly fitted, or fitted with improper cementing material, is as troublesome as one from which the luting has been allowed to protrude. Nothing is more desirable than the recognition of care and skill, and the fostering by every means of an honourable pride in the workmen employed in drainage work, and frequently working in dirty holes, in darkness or semi-darkness, disturbed times and again by the passing of other workmen and of materials, driven perhaps by an exacting or ill-tempered foreman, responding to the demands for quicker progress from an employer, rendered desperate by a proprietor to whom a poisoned goad has, it may be, been deftly applied at his domestic hearth. The temptation to think only of quantity without heeding quality must be strong at such times; average human nature is not abjectly subject to duty. The absence of special training should be remembered also in extenuation of faults. In times of pressure on the cheaper kinds of work, a strong, decently intelligent labourer has been known to leave pickaxe and shovel for a day or two and lay drains with a will. Special training, plenty of supervision and good lighting, should not be wanting for every length of good pipe that is laid. There should also be a general disposition to haste without hurry, and some special sign of appreciation from someone when all is found correct at the end.

Invention is always at work suggesting modifications in the form of pipes, but the whole-socket pipes hold their own as yet. By using half-socket pipes every alternate pipe can be removed without breaking any pipes for inspection of the interior of the drain, or for the insertion of a junction to receive a new drain; but it will be readily seen that a gain is balanced by a loss. Sockets are sometimes dispensed with entirely. Broad chairs of stoneware, each five sides of a decagon externally, are first set down, and the pipes are laid and bedded upon these chairs. When the whole have been inspected and tested, saddle-covers are put in their places, with soft clay under them. Any saddle can be readily removed for inspection, or putting in a saddle junction. Reasonable people do not demand a new junction very frequently, and for drains under dwellings, which are best thoroughly sealed up, no contrivance for the occasional removal of bits of pipes is in much favour. They may be useful at times elsewhere, but further mention of them may be omitted for the moment.

When Stanford's Patent Joint is used, skill and love of thoroughness will be of service in the workman who lays them, albeit the attempt is made to produce pipes requiring no skilled labour in the laying. The spigot ends of the pipes are trimmed, so as to prepare those not precisely accurate in form for receiving a perfect ring cast in a mould. The socket receives chipping, and a ring is cast on to it also. These rings are spherical in section, and the fit thus resembles that of a ball and socket joint. The spigots and sockets are wiped clean, the sockets oiled, the pipes placed in position, and gentle blows from a wooden mallet send the upper pipe into its place; by a peculiar sound the workman knows when it is "home." Of course the preparation of the bed is very important still, and the keeping of line and level; besides the joints may be badly moulded on the spot, or chipped and damaged in transport if supplied on the pipes; the spigot pipe may not be driven properly home, or mud splashings may be left on the joints. There are other special joints, but it is only possible to touch lightly on jointing, or indeed on any other division of the subject. After giving a little insight into general principles, inquiry into the merits or demerits of particular methods of inventions must be left alone.

Stoneware drains are ordinarily made in all sizes from 1½ inches to 24 inches in diameter. They can thus be obtained (4) of sizes not too large for house drains, and can be easily flushed and cleaned (5). For families of any size the main drains

are usually 6 inches in diameter, and the branch drains 4 inches. As the rate of flow in any pipe—the fall remaining the same—is quickened by narrowing the pipe, and thus deepening the stream, any excess of size is really prejudicial.

3. *Some Defects in Stoneware Drains.*—When pipes are ordered hurriedly and arrive too late, there is sometimes a wish to use those which have come, and not to wait further for the special pipes which ought to have been ordered before. When the changes cannot be made at the junctions, pipes of one diameter should always be joined to pipes of another diameter by diminishing pipes and in no other way. Patched junctions are painful shows of inefficiency; obstruction comes sooner or later when the filling-up breaks down into the pipe. Right-angled junctions cause trouble; a branch should discharge through a junction at an angle approaching the line of flow of the drain which is entered. When bends are required, but have not been supplied, straight pipes will be used with apologies, "so as to get the work done," unless there is interference. If the curve is of short radius the spigot ends will actually leave the sockets on their outer sides. Speaking generally, very bad stoneware drains will be of porous pipes, rough in their insides, broken and pieced with cement; some joints gaping, others leaking; some badly made with bad cement, some with projections of the cement inside; not sealed over; laid to curved and irregular lines, with right-angled junctions; the curves made of straight pipes, without diminishing pieces at change of size, and occasionally with larger pipes inserted in the run of smaller ones; without inspection chambers; put on new made or yielding ground; in parts running uphill, and the rest laid to flat and irregular gradients.

4. *Iron Pipes and Subways.*—Some architects, in certain parts of their best work, use iron pipes with yarn and lead joints, similar to those in water-mains, in preference to any stoneware drains. In Paris they are always used—not buried in the ground, but exposed to view. In America they are common, and compulsory in some places for drains under dwellings. They are enamelled inside, or treated by the Bower-Barff (rustless iron) process. Mr. John J. Stevenson, the architect of the new mansions at Kensington Court, has taken great pains there, and used all the most modern sanitary appliances. He has kindly lent me a drawing showing the system pursued. Heavy cast-iron pipes, 5 inches diameter, are laid in perfectly straight lines under the houses. They are lined with Dr. Angus Smith's composition, a preparation of tar, which gives a smooth and apparently indestructible surface. Joints occur at every 6 feet, and are thus one-third of the number in a stoneware drain; there are no difficulties with defective cement or the careless use of it. Being much more costly than stoneware pipes, the iron pipes are only used immediately under the houses.

Similar iron pipes were put by Mr. E. C. Robins on wall brackets in a subway—a kind of sub-basement—in the Museum of Building Appliances, in Maddox Street, Regent Street. This sub-basement is a sort of passage about 4 feet wide and 7 feet high, the floor 16 feet under the street level. Air is admitted to it from the area next the street, and there is a good sized shaft at the back about 30 feet in height above the floor. Other pipes are placed in the subway as well as the iron drain, and fresh air led from it to supply the rooms throughout the building. The use of subways under the basement storeys of London houses was advocated some years ago by Professor Kerr. He placed "an annexe at the back of the house to contain all the water-closets, the bath-rooms, all cisterns, and the housemaids' sinks, and draw-off taps. A vertical shaft within the annexe would run from the basement floor to the roof with an escape for air at the top. This shaft would accommodate all vertical pipes—water-pipes up and down, wastes, soil-pipes, gas-pipes, the heating circulation, perhaps the rain water-pipe, and the ventilation of the kitchen, and perhaps of the principal rooms might be accomplished by its means. The subway would contain all the horizontal continuations of the pipes from the shaft to the street, and also the house-drains. It would extend from the usual open area in front of the house to an open area at the back, and at each end there would be a manhole for access."

5. *Lines and Levels.*—Subways are luxuries which cannot be afforded every day. We will go back to stoneware pipes, with the remark that good materials, put together properly, must be put in the right place. Long straight lines are always preferable. It is more easy to get the levels right, and to see that they are so; there are no checks to the flow, which is a very important point with water-borne solid matter; they can be more readily tested at first, and from time to time, and more readily unstopped. For a drain under a dwelling it is indispensable that it shall run in one straight line from the point at which it enters to that at which it leaves, and for a few feet more at each end.

At the junction of the straight lengths of the pipe drains, and at any bends, small inspection chambers are put; at the bottom of these a length of half-pipe forms the channel. When the cover is off, the character of the flow of the drain is seen at once. Brickwork is carried up above the line of flow. The stone cover of the pit is bedded in mortar, and the joint round it pointed at the surface with cement. These are only opened when defects are supposed to exist, or when special cleansing of the drains is to be undertaken.



Having determined the lines which the drains are to follow, it is then necessary to settle the inclinations at which they shall be laid, in order that they may convey all effete matter quickly to the sewers, and be self-cleansing. Of course if there was too much fall, and the slightest check, the solids would remain and the water run away. But too much fall is the rarest thing; not being able to get enough is what we are wont to grumble about. The fall is strictly limited by the depth of the sewer below the lowest floor, and the necessity of keeping the drain well under the floor at the upper end; 2 feet under the finished floor is considered desirable, though we have sometimes to make ourselves contented with less. The least fall approved for 6-inch drains is 1 in 40, that is 3 inches fall in each 10 feet of horizontal distance. More is valued if it can be managed, certainly 4-inch drains should have more. It is desirable to have a flow of at least 150 feet per minute with a shallow stream of water. When drains are laid to flat gradients some special means of flushing them must be used daily.

If the pipes are laid upon yielding ground they will not keep level; some will tip one way and some another, the joints will snap, and sometimes the pipes also, resulting in hills and dales, leaking joints and stoppages. It is so easy to be wrong. Too much earth is taken out in parts of the trench, and some of it filled back, and the ramming perfunctorily done, or nature may have interposed little pieces of yielding stuff between pieces of solid. A bed of cement concrete, carefully levelled on the top to the proper fall—a bed of artificial rock in fact—laid along the whole length, will give the pipes a fair chance. In this concrete grooves will be made to receive the lower parts of the pipe-sockets, and the whole of the length of each pipe will then rest on an immovable bed.

Refilling the trench must be managed without disturbing the pipes. The hollows under them being very carefully filled up with concrete, it must also be put at the side of the pipes, with a thickness of 6 inches on each side, and then 6 inches over the top. Such a covering of cement concrete is usually stipulated for in byelaws for drains under dwellings, sealing up the pipes altogether as an additional precaution against evil results from defective jointing. It also serves to protect the pipes from displacement by impact on the surfaces above them.

**6. Disconnection from Sewer; Ventilation; Connection with Sewer.**—After the house-drain has left the house, and before it reaches the sewer, a break is made, and the drain runs past an open space. On the side of this air-space, next the sewer, is a water-trap with a good seal, intended to prevent any bad air in the sewer from reaching the air-space. If, however, this trap is neglected, or pressed upon a good deal from the sewer, tainted air will not enter the house, but will find its way out of the air-space. From the air-space fresh air enters the drains under the house, and a current is kept constantly moving through them by arranging ventilating pipes at the higher ends, which shall run up to the top of the building.

Some disconnecting traps are large shaped pieces of stoneware, which shut off the sewer at one end, and receive the house-drains at the other. A pipe carried up at the house end supplies the fresh air above the trap, when a grating at the surface of the pavement is objected to. With other traps the construction of a man-hole is contemplated. This is a little chamber built up under the pavement of an area, through which the drainage is carried in half-pipes of enamelled ware. The trap is a syphon or U trap put on the side of the manhole next the sewer. A grating at the surface is sometimes put when there is plenty of space; more usually a flue is constructed and filled in with a ventilator having small mica valves, which rise to admit air into the flue, but refuse to let the air come out. In time of storm there might be a set in the wrong direction—the long upright pipe at the back of the building might carry a rush of air downwards, and it would find vent at the induct and cause annoyance. Protected by these mica valves, the flue is unsuspect, and a moment of rest allows the pent-up air to go upwards according to its want. The manhole makes inspection of the drains easy; an air-tight iron cover is often put over it.

The ventilating pipes, at the upper ends of the house drains, are of lead or of galvanised cast iron, well caulked at the joints, and all four inches in diameter, or as large as the branches they start from. The soil pipe serving the water-closet is usually extended upwards; being joined at its foot to the house drains without any trap, a current of air passes steadily through drains and pipes. Long branches must have special ventilating pipes; short ones will be cleared of air by the discharges, and supplied with freshened air from the main drain. These upcast exhaust pipes must not finish near windows or cisterns, nor be stopped at the eaves, so that they discharge under the open joints of slating; nor must they stop just above the tops of chimney flues, nor be carried into the flues themselves. If they are, bad air will reach the insides of rooms. Wires, or a perforated finial, must be put to keep out birds, or an approved cowl.

The drain should be connected with the sewer in the upper half, above the line of flow, at the haunch just above the springing. The custom at one time was to put the mouths of the house drains below the water-level in the sewers, but this is given up

now; the intention was to prevent sewer air entering the drains. Connections must join the sewers obliquely in the direction of the line of flow of the sewer. The pipe sewer junction blocks, invented by Mr. Cockrill, are a considerable improvement. Oblique junction blocks and bends are used for brick sewers. Flap-traps are railed at and still used. The hinged valve allows a passage out from the house drain, but not into it; the flap closes by its own weight when the flow has passed through.

**7. Inspection, Flushing and Cleaning.**—Other connections with house drains for sinks, baths, rain water pipes, &c., the traps to them, and the ventilation of pipes and traps, form a branch of our subject, not forgotten but very extensive. The construction, maintenance, cleansing, and the efficient ventilation of sewers might seem another branch. Everybody is interested in it, architects specially so. It is well, however, for everybody to have his own province, and do the best he can in it, and architects are content with a province which extends, in large towns, as far as the walls of the sewers, but not beyond.

When the drains are completed, disconnected, connected and ventilated, they must be examined keenly before they are used, so that if by chance there are defects they may be remedied. If the lower end of the house drain is plugged and the pipes are filled with water and left for a few hours, and the level of the water in the testing bend has not sunk, it has been proved that pipes and joints are sound, that there are no vents for bad air, or cracks through which moisture will run away. The levels of straight drains can be tested by actual measurement, and the effectiveness of the gradient proved by floating down something in a good flush, and noting the time. At cast-iron terminals, with air-tight brass plugs placed in a back area at the upper end of a drain, various tests for soundness and level can easily be applied. With drains in use, water mixed with lime is poured in at the end. By the amount and character of the discolouration of the effluent water, before and after flushing, the condition of the insides of the pipes will be judged.

The beautiful arrangement shown by Mr. Hawksley (470, Class 22) for testing house-drains and soil-pipes with a plumber's force-pump and gas-pressure gauges, shows when there is any leakage, and localises the leakage too. The traps act as plugs; the ventilating pipes, and the end of the house-drain next the disconnecting trap, must be thoroughly plugged up. The smoke test calls attention to important defects; little holes may, it is true, be plugged up by some chance at the moment when the test is applied. Straw burnt in the drain may send smoke all along it, or smoke may be generated in a vessel and forced in by a machine. These appeal mainly to the sight. The peppermint test—a favourite one on account of the ease with which it is applied—appeals to the sense of smell, as does sulphur burnt in a shovel at the mouth of the disconnection chamber. Ether, oil of mint, and other strong smells have been suggested.

The difficulty in active life is in getting anybody to look for defects periodically. Detection is disagreeable for one thing; afterwards there is the remedy, which seems not worse than the disease it may be, but unpleasant and worrying. Mr. George Godwin, one of the honoured pioneers of all sanitary improvements, an architect who, forty years ago, showed the way in which all the world is now prepared to walk, pointed out constantly that "good health shows good sense; that the laws of nature have been understood and attended to." This, in the present connection, would mean that if a householder cannot get his servants to look after the drains at proper intervals, he had better employ a sanitary association or some one else to do so. The same thing might have been said of flushing years ago, but self-acting flushing tanks now do that work without being looked after. All that is necessary is to set a tap to run a small stream, and the drains will be scoured by the sudden rush of a number of gallons of water at the required intervals. Thirty or fifty gallons liberated so that the 6-inch drains are at least half full clears away obstacles, and cleanses the surfaces of the pipes. Large flushes may indeed, if applied too frequently, damage the pipes by washing away the cement from the joints. It is well to be somewhat moderate in the use, except where the drains have little fall; then a daily flush is indispensable. The supply of air to all traps must be well provided for with these flushing arrangements, or the rush will syphon out the water from them.

The fine sand used in scouring metal behaves awkwardly in a drain, and grease is a positive terror. The amount of energetic invention expended on grease taps should appeal to every visitor to the exhibition. Even with good flushing, occasional cleansing by absolute scraping and brushing is desirable. It ought to be set about at once when there are indications of trouble in the air. Traps and bends and branch drains should not be allowed to get wrong, but looked to from time to time. By bundles of screw-jointed canes any distance may be reached, and obstacles removed by means of rakes, balls, rollers, and brushes with comparative ease from drains laid in straight lines and to regular falls. Put shortly, all that is necessary for starting drains properly and keeping them right is to use the right materials and put them together in the right way—in straight lines with proper falls, and to send plenty of water and fresh air through them.



## THE PARKES MUSEUM.

AT the annual meeting held July 9, Captain Douglas Galton in the chair, a letter was read from the Duke of Westminster regretting his inability to attend the meeting, and a report was read by the chairman of Council showing the valuable work that had been carried out by the museum during the past year.

Twenty-one lectures have been arranged by the Council and delivered in the museum by some of the best authorities on Hygiene and Sanitary Science. These lectures have contained much valuable information, and have dealt with a majority of the subjects included in the scope of the museum in a most useful and interesting manner.

The museum has been largely used by lecturers on Public Health and other skilled teachers, for practical demonstrations to various classes of students, &c., who for this purpose have been admitted to the museum without entrance fee. In this way the special advantages offered by the museum have been utilised for the purpose of instructing a large number of students and others who, by the nature of their several callings, may be expected in various ways to exercise an important influence in the promotion of health in connection with the construction of dwellings and otherwise; and the Council are glad to report that the facilities thus offered have been fully appreciated, both teachers and students having expressed a desire that further opportunities of the same sort might be afforded them. The members numbered ninety-nine on June 30, 1883, just after the opening of the museum. They now number 260.

During the year the museum has been visited by 6,870 people.

The utility of the museum has increased month by month. The museum has clearly met a great public want, and the Council would again strongly urge upon the members, and upon all who are interested in sanitation, to use their personal influence so to increase the number of members and life members that the future of so valuable an institution may no longer be a matter of doubt.

## TEXTILE FABRICS.\*

BY WILLIAM MORRIS.

THE subject I have to speak on is a sufficiently wide one, and I can do little more than hint at points of interest in it for your further thought and consideration; all the more as I think I shall be right in supposing that except for anyone who may be present being actually engaged in their manufacture, you have very little idea as to how a piece of cloth is made, and not much as to the characteristic differences between the manufactures of diverse periods.

However, one limitation to my subject I will at once state. I am going to treat it as an artist and archæologist, not as a manufacturer, as we call it; that is, I shall be considering the wares in question from the point of view of their usefulness, using the word in its widest sense, to the consumer, and not as marketable articles as subject-matter for exchange. I must assume that the goods I am speaking of were made primarily for use, and only secondarily for sale; that, you see, will limit me to an historical discourse on textile fabrics, since at present those wares, like all other wares of civilised countries, are made primarily for sale and only secondarily for use.

Now, before I begin to speak of the actual history of this important art of weaving, I will run through the various forms of it which it comprises. But first of all it may be necessary to explain the two words which I shall be compelled to use, because I have noticed that the writers of leading articles and poetry are sometimes a little vague about the way they use these words. Well, the warp is the set of strained threads (sometimes vertical, sometimes horizontal) on which the work is founded; the weft is the thread which is *waved* in and out across this warp, and the woof or web is the product of the two. I think I may explain any other words of this sort as they are used.

Well, first there is plain weaving in its simplest form, where the weft crosses the warp regularly and alternately; of that I need say no more, because I have to speak mostly of the characteristic ornament of the different periods, and this plain weaving is not susceptible of ornament—woven ornament I mean. To obtain that the weft must cross the warp at regular intervals, but not alternately; on the surface either warp or weft must predominate to make a pattern.

To speak broadly, in the most ordinary kind of pattern-weaving the threads come to the surface in a regular and mechanical manner. I have not time to explain all the ways in which this is done, but must ask you to accept that simple statement and allow me to call this kind common-figure weaving. Sometimes, as a sub-division of this common figure-weaving, the warp comes chiefly to the surface, which makes a satin; and also sometimes these warp-threads are caught up over wires with a sharp edge, which

are pulled out as the work goes on, leaving a surface with a raised pile, that is velvet.

In the next kind of weaving, the weft crosses the warp alternately indeed, as in plain, unpatterned weaving, but instead of being carried in one stroke, all across the web, ends or returns wherever the colour changes, so forming a kind of Mosaic of coloured patches; this is tapestry, using the word in its narrowest sense: as a detail of this work I ought to mention that in tapestry-weaving the weft is put in so loosely, and driven home so carefully, that the warp is entirely hidden by the weft.

That work may be considered as a subdivision of this kind of weaving where thrums of wool, hair, or silk are knotted into a plain canvas as the work proceeds, so as to form a pile with their cut ends: this is carpet weaving.

Lastly comes a kind of ornamental web in which the ornament is not produced by weaving, but by painting by hand or printing, combined with dyeing (in various ways) in the piece, printed goods, chintzes, and so on. Needle-worked embroidery may be considered as another way of ornamenting a cloth. How all these manners of weaving have been practised from time immemorial, and are in use to-day, with no more variation of method than what comes from the application of machinery for lifting up the threads of the warp, as in the Jacquard machine, now universally used in civilised countries, and the use of steam power for throwing the shuttle—these variations of method are of little or no interest from the artistic point of view, and are only used to get more profit out of the production of the ways. They are incidental and not essential.

However, ancient as all these methods are, the oldest way of ornamenting a cloth otherwise than by merely painting on it with a pigment, not dyeing or by embroidery, must have been the tapestry method, as it requires but a very small amount of technical skill. The figured webs of the Homeric poems were probably of this kind of work. In the British Museum there is a scrap of cloth of the ancient Central American civilisation so woven; the patterned cloths of the North of Europe before the fourteenth century were mostly tapestries; the South Kensington Museum has a precious fragment of such work of the eleventh or early twelfth century. Among peoples of higher industrial skill, the common figure-weaving took the place of this rude work for ordinary recurring patterns, but tapestry was still used for producing what may fairly be called woven pictures, webs whose elaboration and want of repetition of pattern would scarcely allow of any reasonable effect being produced by mere mechanical weaving.

The painting or printing of cloths is doubtless a very ancient practice, I mean to say the painting them with dyes, not pigments. The minute and elaborate figure ornament which is shown on some of the Egyptian sculpture has to me a look of being done by means of this art. It is a confirmation of this probability that Pliny, in a now famous passage, notices the fact that Egypt in his day practised a certain art of figuring cloth, his description of which leaves no doubt that it was what we should now call madder printing or painting. Of this art, I shall have to speak in the notice of dyeing, which will conclude this lecture.

So here we have to consider, to leave out plain unornamental weaving—1st. Common or mechanical weaving, including satin, damask, and velvet; 2nd. Tapestry, including carpet weaving; and 3rd. Painting or printing with dyes.

Let us consider, briefly, the practical history of these three arts. And first the mechanical or common weaving. With wares so perishable as woven cloth, it is not wonderful that we have little real record of the stuffs of antiquity, because the descriptions of the poets and writers of the time cannot be depended on for accuracy, as they of course assumed a general knowledge in their audience of the articles described. The pictured art of the Central Greek period gives us at all events some idea of the quality of the stuffs worn at the period, and, in so doing, fully confirm the beautiful and simple description of the fine garment in the "Odyssey," which is likened to the inner skin of an onion; a figure of speech which, taken with the representations of delicate cloth in the figure-work of the time of Pericles, and earlier and later, gives one an idea of something like those mixed-fabrics of silk and cotton which are still made in Greece and Anatolia; only you must remember that the early classical peoples at least did not know of either silk or cotton, so that flax was probably the material of these fine garments, and we know by the evidence of the Egyptian tombs that linen was woven there of the utmost delicacy and fineness.

I don't suppose we need doubt that mechanical pattern weaving was practised by the Greeks in their earlier and palmy days; but only I fancy for the simpler kinds of patterns in piece goods, diapers, and so forth. I conclude the running borders to have been needle-work, or may be dyed painting. We have a few representations of looms to help us in looking into this matter which, however, do not prove much: they are all vertical, and at first sight look nearly like the looms used throughout the Middle Ages, and to-day at the Gobelins for tapestry-weaving. In one which is figured in a tomb at Beni Hassan, in Egypt, the details of an ordinary high-warp tapestry-loom are all given accurately; but the weavers seem to be weaving nothing but plain cloth; in this loom the cloth is being worked downwards as in the ordinary tapestry-loom.

\* A paper read at a Conference at the International Health Exhibition.



In another representation taken from a Greek vase of about 400 B.C., Penelope is seated before her famous web, which is being worked in an upright loom; there is only one beam to it, the cloth-beam, and the work is woven upward. The warps are kept at the stretch at the bottom by weights looking too small to be effective: the web is figured, has a border of the ordinary subsidiary patterns of classical art, and a stripe of monsters on a winged human figure. It seems to have been concluded that this represents actual tapestry weaving; but too hastily, perhaps, as the high-warp loom only means a certain amount of inconvenience in foregoing the mechanical advantages of the spring-staves worked by treadles; also this Greek loom of 400 B.C. is in all respects like the looms in use in Iceland and the Faroes within the last sixty years for weaving ordinary cloth, plain or chequered.

So much, and little enough, of the loom-work of the early classical period, a time when the merely industrial arts, which were, you must remember, mostly carried out by slave labour were despised; when private luxury scarcely existed; a fact most happy both for the decency of general life and the glory of the arts.

Doubtless the ingenuity of the industrial arts gained much during the later and Imperial days of Rome; but there is little direct evidence in the remains artistic or literary of the time itself, Pliny, who is very particular on the subject of dyeing, helping us nothing in the matter of weaving. However, perishable as the actual woven wares are, the art is particularly conservative in design, and when we get nearer to our own epoch we have a certain number of specimens preserved to us from the tenth century downward, which not only show us how people wove in those days, but give us more than a hint of the fashions of centuries before their time. A very small fragment of cloth found at Sitten in Switzerland, gives us doubtless a type of a late Roman figured stuff: the pattern which repeats in a smallish space is of a woman seated on a fish-tailed form leopard-headed amongst conventional foliage; the point of it as an illustration of our history being that it is designed wholly in the classical manner, so that whatever the date may be, it is absolute evidence as far as it goes of the kind of work of the later classical times.

However, it is now time for us to leave this somewhat barren desert of vague poetical descriptions, hasty and generalised drawings on vases or tombs, and very rare scraps of the woven goods themselves, and march into the more fruitful country of the early Middle Ages, which give us quite direct evidence of the arts of weaving of the days of the Byzantine Empire. Now you must remember that whatever share the city of New Rome took in actually producing works of industrial arts under her Emperors, she was at least the *foster mother* of those arts for all Mediæval Europe, and from her came that influence which brought about the new art of Europe, whose origins are obscure enough till they met and fused at Constantinople into a style which for centuries after was world-wide: this was natural enough. Looked upon as an European city, Byzantium was for long the only great city of Europe that was really alive and dominant; in peace and war, as a mistress or an enemy, she dealt with all the great birth-countries of art and letters, nay of human life. India, Mesopotamia, Syria, Persia, Asia Minor, Egypt—the ideas and arts of all these countries touched her and mingled with the remains of the older art of Greece, from which the academicalism of the long Romano-Greek period had not crushed out all the life, sorely as it had weighed upon it. Byzantium, then, the Byzantium of Justinian and onwards, we must look upon as the capital of the industrial arts from the sixth to the thirteenth century, and in none of them was her influence more obvious than in that of weaving. One event alone which took place there revolutionised this art in Europe, the introduction of silk in the sixth century, which event has also made it more possible to judge of what was done in early times, because the material having the advantage of not being liable to be moth-eaten, some specimens of early date have been left us.

It would take us much too long to discuss the much-disputed question of the actual date of some of these scraps, such as those found in the tomb of Charles the Great at Aix la Chapelle; it is enough for us that, as I have said, they undoubtedly represent the design of the stuffs of Justinian's period, and through that period throw light on the fashions of Old Rome, and even of classical Athens. These earliest Byzantine or quasi-Byzantine stuffs are most commonly figured with contiguous circles or wreaths, which enclose divers subjects—sometimes the chariot race in the hippodrome, the consular sacrifice, the Byzantine emperors as consuls of the Republic being the chief figures; the lion hunt in the Emperor's arena, or the park of the great king; the gladiator again dealing with his lion in the arena, and probably doing duty for Samson in the eyes of the devoted Byzantine Christian. All these subjects take us away into classical times, but there are other subjects within these Byzantine or early Mediæval garlands which carry us further back, and hint at a time before the dawn of history, much simpler though they be on the surface, for often these circles are *inhabited* by beasts winged or otherwise, griffins, elephants, and birds opposing one another, as the heralds call it, on either side of an upright object, sometimes branched variously. Now, though you may think that this is a very natural way of filling a circle ornamentally, yet I think it has been conclusively proved

that these beasts and their dividing object are symbols of ancient worship, the object being perhaps translated by the Zoroastrians as the holy fire, though originally signifying the holy tree which has played such a curious part in ancient symbolism or betokening of mysteries.

So then Constantinople takes us back not only to the time of the Caesars, on one side, but on the other also to that of the great king of Persia, to the kings of Assyria, the monarchs of Babylon, and far beyond them to the Accadian people and their astronomical lore.

But if Constantinople was the capital of the weaver's art till the twelfth century, during the next two centuries Palermo took her place. The chroniclers tell us that just in the middle of the twelfth century Roger, the Norman king of Sicily, in a raid he made on the Eastern empire, took Corinth, Thebes, and Athens, where there was still a considerable silk-weaving industry, and that part of the booty which he carried off from those towns consisted of the silk-weavers themselves and their families, whom he took back with him to Palermo, and established in a royal factory attached to his palace, bidding them teach their mystery to his own people. From that time till past the Mediæval period Sicily was the great workshop for silk goods.

Although this story has been much accepted, told as it was gravely and circumstantially, it must be looked upon as a legend founded on the undoubted fact that in the thirteenth and fourteenth centuries Sicily was the headquarters of the silk-weaving craft. The population of Sicily consisted largely of Saracen tribes, who kept amongst them the skill in the industrial arts which they had acquired in the early Middle Ages; besides, Sicily had been a most important outwork of the Byzantine empire in its palmy days, was in fact much more important than the towns of Greece proper, and was not at all likely to have lacked its due weaving craft. Altogether it seems extremely unlikely that Roger should have been the first of the Norman kings to set up a royal weaving-shed, especially as the Norman kings from the first had affected to imitate Oriental customs, reigning, as I have said, among a population which was really Oriental; and this custom of a royal factory, connected as it was with the establishment of the Seraglio, which it is said the Norman kings were not slow to adopt, would have seemed a necessity to a monarch at Palermo long before the time of Roger's raid on Greece. You may note at this place that these weaving-sheds of Oriental potentates turned out those rich stuffs which were specially used for presents and robes of honour, and that Arab writing intermingled with the design; a fact which has served to date some of these webs beyond dispute, as the writing sometimes includes the name of the reigning prince. A word or two as to these written stuffs will have to be said presently.

Anyhow, however the manufacture was established, there is no question that in the fourteenth century Palermo was headquarters of the silk-weaving craft, and most happily we have abundance of evidence of the kind of work produced there, for a great many fragments have been preserved to us in the treasure-houses of the churches of that and the succeeding century; nay, even in England in spite of the Reformation, some evidence is left us of the long way that these beautiful goods travelled, for on the backgrounds of painted panels in the richly-adorned screens of our East Anglian churches, and on the robes of the saints depicted thereon, are figured patterns more or less accurately taken from these Sicilian webs, which doubtless formed part of the vestments of the sacristy.

North Germany, where the Reformation went on in its earlier days more peaceably and with less destruction than in England, has, however, been the great storehouse of these invaluable treasures, the sacristy of the church of St. Mary at Danzig being particularly rich in them; the museums at Vienna, the Louvre, and our own here are well stocked with examples, which I must say as to ourselves are not treated with the respect (by the public, I mean) which they deserve. For I must tell you that these stuffs, designed at the heyday of Mediæval art, uniting the wild fancy and luxurious intricacy of the East with the straightforward story-telling imagination and clear definite drawing of Mediæval Europe, are the very crown of design as applied to weaving.

To a certain extent they preserved the older fashions, and repeated, though not servilely, the patterns of the Byzantine epoch; the writing on the webs seems to have been used by them as a sort of trade mark, implying that they were of fine Oriental manufacture, only for the most part it is mere sham writing, a scrawl which has borrowed certain obvious forms from the real Arabic letters, whose graceful and energetic curves fitted them specially for this kind of written ornament. For the rest, the resource and the ingenuity of structure, the richness of imagination in these stuffs is amazing: beasts, birds, and compound monsters are frequent, often arranged in opposition on each side of the holy tree or holy fire aforesaid, but often simply passing their lives in the scenes of nature, and generally admirably drawn as to their characteristics, though of course generalised to suit the somewhat intractable material. Then we have castles, fountains, islands, ships, ship-sails, and other such inanimate objects. Finally, the weaver uses the human form often enough, though seldom complete. Half-women lean down from palm-trees, emerge from shell-like forms amongst the woods with nets in their hands,



spread their floating hair over the whole pattern, water their hounds at the woodland fountains, and so forth; now and again definite winged angels are introduced. In one whole class of designs a prominent feature is the sun-dog, as it used to be called in the older English tongue; a cloud barely hiding the sun, which sends its straight rays across the design with admirable effect.

And all these things are drawn at once with the utmost delicacy, and complete firmness. There is no attempt to involve or obscure anything, yet the beauty of the drawing and the ingenuity of the pattern combined give us that satisfying sense of ease and mystery which does not force us to keep following for ever the repetition of the pattern—in short, in most of the designs of this place and period there is nothing to desire either for beauty, fitness, or imagination.

From Palermo the art of silk-weaving found its way into the more northern parts of Italy, and settled definitely at Lucca, the centre of a great silk-growing district, whose manufacture overlaps that of Palermo in date, so that it is not easy to state with any certainty whether such and such a piece of goods was woven at one city or the other; but as the years passed a kind of design peculiarly graceful, but not so strongly accentuated as the earlier patterns, marks this school. These patterns are generally founded on the vine; birds and animals are often introduced into them, but do not play such a prominent part as in the earlier cloths. As to the technique of these webs of Sicily and Lucca, it is on all sides admirable, and in nothing more so than its simplicity; so fertile was the designer, his work so crisp, elegant, and powerful at once, that it would have been the height of bad taste to complicate or huddle it up with tormenting the web into ribs, or stripes, or honeycombs, or herring-bones, or long, weak floats of silk. These are the poor refuges from barrenness of invention which a less artistic age is driven to, and both have used, and still uses, them in a most profuse and wearisome way. One peculiarity I may note about all these early stuffs—gold is freely used in them, but the gold thread is not like that of our time and some centuries back, to wit, a thin ribbon of gilt silver twisted round a floss silk core, but is made by gilding strips of fine vellum, and twisting that round a core of hemp or hand silk. This plan has both its advantages and disadvantages; it does not wear as well as the wire-twisted thread, but also is not so apt to tarnish. The Chinese still use similar gold thread, only substituting gilt paper for gilt vellum does not make so good an article. Before passing to the next century, I must mention that all this while much silk ware was made in the East—at Cairo and thereabout was a manufactory of striped silk, in which the Arabic writing, real and finely designed, played a great part. In this work the gold was always flat strips of the gilt parchment, which marks the special manufactory. In all cases you must remember there was at this time no essential difference between the ornament of east and west; even in architecture the resemblances are more noticeable than the differences; but of course in the lesser art we are considering the needs of climate and manners had not the same influence as in architecture. Accordingly we find not only the same details, but the same patterns in use in Persia and Syria as in Sicily and Italy. It is also interesting to note that pieces of Chinese damask are not seldom to be found as the grounds of ecclesiastical vestments, whose patterns are identical with those even now woven there.

As to Northern Europe, doubtless the ornamental weaving, which was mostly worsted, was chiefly tapestry work; but it seems that some kind of figured stuff other than that was made. In the Edicts of St. Louis mention is made of, first, "tapisserie à la haute lisse," and "tapisserie Saracenois," of which more anon; and also of "tapisseries nostrez," which last are obviously goods made in a long piece for cutting and joining: my own impression is that these "tapisseries nostrez" were work, like the rude flowered stuff traditionally made by the Italian peasants to-day in the Abruzzi for instance, and of which the Roman peasant women's aprons are made; this impression is chiefly founded on the fact that exactly the same make of cloth is woven in Iceland for coverlets, saddle-cloths and the like. It seems, however, that early in the fourteenth century there was some sort of silk-weaving and even velvets in Paris, but I imagine it to have been either plain weaving or tapestry, and the velvet to have been made like a carpet. When the unlucky Frenchmen who were taken at the rout of Nicopolis, 1396, were arranging their ransom with Amorath, and were trying to find out with what rarities they would be likely to soften the heart of their conqueror, they were told that he had a turn for the fine tapestry of Arras, if so be they were of good, ancient stories; fine linen of Rheims would not come amiss to him either, or fine scarlets (more of those afterwards), for, said their friends, as to cloths of silk and gold the king and the lords there in Turkey had of them enough and to spare.

(To be continued.)

A Statue of the late Mr. A. B. Stewart has been erected on the esplanade at Rothesay. It is of bronze, and is 8½ feet high, standing on a pedestal of grey granite 10 feet high. Mr. John Mossman, of Glasgow, was the sculptor. The cost was about 1,000*l*. It is the first statue erected in Rothesay.

## BUILDING IN NOTTINGHAM.

THE report which has been presented to the Town Council by the General Works and Highways Committee shows that there is no town in England in which so many buildings had been carried out during the last two years as in Nottingham. During the past twelve months apportionments have been made for 85 streets, necessitating the preparation and service of at least 700 separate apportionments on owners of property. Altogether, upwards of 2,000 notices have been served in connection with private improvement works during the year. A very large area of land has recently been laid out for building purposes, and this has of course involved the construction of a great number of new streets. Building operations in the borough have been carried on at a very rapid rate during the past twelve months, the number of buildings for which plans have been passed in that period being 3,199. This shows a decrease of 151 from the number passed for twelve months ending October 31, 1882. This diminution in number was caused by the temporary slackness of the building trades in the first quarter of the year 1884. The committee believe that the building of houses and other property in this borough during the past five or six years is of such magnitude as to be almost unequalled in any other town. The committee believe that the town may be congratulated on the character of the house property recently built in the borough; although there has been an enormous amount of what is termed "speculative building" carried on, yet with few exceptions the houses which are built are of a character which will, it is believed, compare favourably with other large towns. The following is a return of plans passed for buildings to be erected in the borough during the last six years:—1879, number of buildings, 2,856; 1880, ditto ditto, 2,399; 1881, ditto ditto, to October 31, 2,987; 1882, ditto ditto, 3,350; 1882, ditto ditto, November 1 to March 25, 1883, 1,465; 1883, ditto ditto, March 26 to March 25, 1884, 3,199.

## LEGAL.

### High Court of Justice.

(Before Mr. JUSTICE KAY.)

SNOW *v.* WHITEHEAD.

The plaintiff in this case had let a piece of land to the defendants, subject to a covenant that no house should be built upon the land of a less value than 400*l*. The defendants, it seemed, had begun building in conformity with the covenant, but the local board had objected to the mode of building, on the ground that there was not sufficient air space behind the houses. In order to comply with this objection the defendants amended their plan of building, and submitted one in which two of the houses were thrown together, a communication being made on the ground floor. The houses were two storeys high, and, as thus altered, they had two separate doors opening to the street, and two separate shop windows fronting to the street. They had each of them a separate staircase; one of them, however, had no kitchen, and in the yard behind, which was common to the two houses, there was only one water-closet and ashpit. The local board approved of the altered plans, and the defendants proceeded to build in accordance with them. It was admitted that each of the two houses, if they were to be considered as separate, was of less value than 400*l*., but if the two buildings were to be treated as one house, the total value exceeded 400*l*. The plaintiff contended that the defendants were committing a breach of the covenant by erecting houses on the land of less value than 400*l*. The defendants called among other witnesses in support of their case, and to prove that the two buildings were one house, the surveyor of the local board, who in the course of his examination admitted in effect that the houses would not, in his opinion, constitute one house without some further internal communication. There was also another ground of action for damages under the following circumstances. The defendants had a house adjoining to a house of the plaintiff's. The defendants had fitted their house with drain pipes which did not communicate with any drain. The water flowing down these pipes settled in the cellar of the defendants' house, and thence percolated into the plaintiff's cellar, doing damage to an amount which was not alleged to exceed 5*l*.

Mr. Justice Kay was of opinion that the two houses in the present case were substantially two and not one, and that therefore a breach of the covenant had been committed. Upon the second point His Lordship stated that the question was whether the defendants by not getting rid of the water in their cellar had committed an actionable wrong. The decision of the House of Lords in *Rylands v. Fletcher* was to the effect that a man who brought noxious matter on to his land, which could not naturally be there, was bound to keep it at his own peril. If one man allowed filth on his land to percolate and poison the well of his neighbour, how could it be said that he was keeping in that filth, which, according to the decisions, he was bound to keep in so as not to injure his neighbour? The principle appeared to him to apply to the present case, and he therefore held that the plaintiff had a right of action, and he assessed the damages at 3*l*.



## ENGINEERING WORKS.

**Putney Bridge.**—On Saturday the memorial-stone of the new bridge connecting Putney and Fulham was laid. It is to replace the wooden bridge which was constructed in 1729 by the carpenter to George II., at a cost of 23,075*l.*, from the designs of Cheselden the surgeon. The new bridge is being built of granite, with five arches, and the width of roadway between the parapets will be 50 feet, comprising a carriageway 32 feet wide, and two footways each 9 feet in width. The arches will be flat and segmental, the centre arch being 144 feet in span, with a rise of 19 feet 3 inches, and giving a clear headway of 20 feet above Trinity high-water mark. The arches on either side of it will be of 129 feet span, with a headway of 17 feet above Trinity high-water mark, and the two end arches 112 feet span, with a headway of 13 feet 9 inches in the centre. The width of the river between the abutments is 700 feet, and there will be a clear waterway under the arches of the bridge of 626 feet. The contract for the work was let to Mr. Waddell, for the sum of 240,000*l.*, and the undertaking was commenced in the summer of 1882. The bridge has been designed and is being executed under the direction of Sir Joseph Bazalgette and Mr. Edward Bazalgette, engineers to the Metropolitan Board of Works. On the memorial-stone, which is on the west side of the southern abutment, and bedded at the level of 18 inches above Trinity high-water mark, is the following inscription:—"This stone was laid by their Royal Highnesses the Prince and Princess of Wales, 12th July, 1884."

## CHURCH BUILDING AND RESTORATION.

**Brawdy Church, Pembrokeshire**, which, for a country parish, is one of the largest in the county and lies off the high road between Haverfordwest and St. David's, was reopened on the 10th inst. by the Dean of St. David's, after the first instalment of the restoration had been effected by Mr. E. Giles, of Carmarthen, under the supervision of the architect, Mr. E. H. Lingen Barker, of Hereford. The work consists of new windows, gable crosses, trenches round building, drainage and ventilation, open pitch pine seats and stalls on wooden platforms, encaustic tile floors in chancel and sacrum, with similar bordering to the stone flagging in passages, repairs to roofs and walls, and the provision of a vestry.

**Govan.**—The foundation-stone of the new parish church has been laid. Externally the church will be like the one that has been taken down, the designs of which were modelled after those of Stratford-on-Avon church. Internally the church is to be completely rearranged, and the entire woodwork renovated. There will be accommodation for 900 people. The whole work is being carried out according to plans prepared by Mr. John Honeyman, architect, Glasgow. Messrs. J. & D. Meikle, Ayr, are the principal contractors.

## NEW BUILDINGS.

**Manchester.**—Additions to Henshaw's Blind Asylum, Manchester, have recently been put in hand. The new works comprise gymnasium, workshop, play-room for girls, servants' hall, and various sanitary improvements. The contract price is 3,355*l.*, and the builders are Messrs. Wilson, Toft & Huntley. The architect is Mr. Charles Heathcote, Manchester.

**Birmingham.**—A block of business premises is in course of erection at the corner of Bull Street and Dalston Street, Birmingham, for Mr. Alfred Humpage. The building, which is six storeys in height, consists of a shop with 82 feet frontage to Dalton Street and 18 feet average depth, having a show-room under and show-rooms and workrooms over. The building, which is Renaissance in character, and executed in red brick with moulded and carved enrichments, is being carried out by Mr. W. Robinson, from designs by Mr. Oliver Essex, A.R.I.B.A., of Birmingham, at an estimated cost of nearly 3,000*l.*

## SCHOOL BUILDINGS.

**Swinton.**—A Board School has been opened in the populous mining district of Roman Terrace, Swinton, at a cost of 1,600*l.*, and to accommodate 250 scholars. Mr. H. L. Tacon, of Rotherham, was the architect, and Mr. C. Bowyer, of Swinton, was the builder.

**Gateshead.**—The foundation-stone of the Southern Memorial New Wesleyan Sunday School and Lecture Hall, Gateshead Fell, has been laid. The architect is Mr. J. J. Lish, and Mr. J. L. Miller, Gateshead, is the contractor. The cost of the whole scheme, when the erection of the school-house and lecture-room are completed, will be upwards of 3,800*l.*

**Leeds.**—The memorial-stones of a Wesleyan Sunday School, Roundhay, have been laid. The new premises, which adjoin the present chapel, will comprise on the ground-floor a minister's vestry, three class-rooms, kitchen, lavatory, and other conveniences;

and on the upper floor, which will be reached by a large, wide staircase, a schoolroom 40 feet by 30 feet, with open timbered roof, rising to a height of 21 feet in the centre. It will be well lighted on three sides by large traceried windows, and ventilated by Stevens's ventilators. The buildings, which are of stone, are being erected from the designs of Mr. G. F. Danby, architect, Leeds, by Mr. G. B. Thain, Wetherby.

**Leamington.**—Two Board Schools, one in Shrubland Street and the other in Leicester Street, have been opened. They are both to be used for girls and infants, and altogether will provide school accommodation for 600 children. Each site contains sufficient land for a boys' school, the building of which is deferred for a time, as there is sufficient accommodation for boys in the existing schools. Messrs. Nicholls & Son, of Birmingham, are the architects for the two schools just completed, one of which was built by Mr. John Fell, and the other by Mr. Bailey.

## GENERAL.

**Mr. Gourlay Steell, R.S.A.**, has been commissioned to paint a companion picture to a group of dogs executed by him for the Queen some years ago.

**A Design by Mr. Henry Holtom**, of Dewsbury, has been selected in the competition for the Free Library and Art Gallery at Swansea.

**Sir Joshua Reynolds's picture, "Simplicity,"** until recently in the possession of the Rev. George Hadow, of Tiverton, has been sold by private contract for 3,760*l.* The painting is a portrait of Miss Theophila Gwatkin, the daughter of one of Sir Joshua's nieces, and an ancestress of Mrs. Hadow.

**A Stained Glass Window** has been placed in the Free Church, West Port, Edinburgh, as a memorial of Dr. Chalmers.

**Mr. C. Marriner, A.R.I.B.A.**, died in London on the 16th inst. For several years he was principal assistant in Messrs. Saxon, Snell & Sons' office.

**An Infirmary** is proposed to be erected for the town and neighbourhood of Workington, and a Committee has been appointed to carry out the scheme.

**Professor Karl Rich Lepsius**, the Egyptologist, has died at Berlin. He was born in 1813, and in 1837 he published "Memoirs on the Architecture and Monuments of the Egyptians." In 1842 an archaeological expedition was sent to Egypt under his direction, and on his return a magnificent folio by M. Lepsius was published at the expense of the King of Prussia.

**Messrs. Archibald Smith & Stevens**, of Janus Works, Queen's Road, Battersea, have received the order for the whole of the lifts, six in number, for Hatchett's new hotel, Piccadilly.

**Messrs. Hawes & Co.** of No. 11, Bloomsbury Court, High Holborn, have opened additional show-rooms at 19B New Oxford Street, W.C. where they have a large selection of their plain and glazed encaustic and decorative tiles, with many new designs, and to meet the increased demand, have added marble chimney-pieces, fenders, &c. to their stock in London, and also stoves with tile slays.

**A Fire** occurred last week at the Royal Armoury or Museum, Madrid, containing the well-known collection of arms, armour, &c., used by many of the Kings of Spain, including Charles V. and Philip II., and their famous great captains, and other valuable curiosities. The armoury is the only portion left standing of the old palace of the Castilian monarchs, and forms one side of a large quadrangle in front of the Royal Palace, being exactly opposite the principal entrance.

**The Council of State in Paris** has issued a decree modifying the rules by which uniformity of height in the houses in Paris is secured. The height of a building, as before, is to depend to a great extent upon the breadth of the road way. Thus, in streets less than 7 metres 80 centimetres wide, 12 metres is the maximum elevation; while in streets of 20 metres and more in width, 20 metres are allowed. This measure, however, does not apply to public buildings.

**The Wallace Statue.**—The following report has been given by the assessors who examined the twenty-five models submitted in the competition for the statue which is to be erected in Duthie Park, Aberdeen:—"Sir Noel Paton and Dr. Rowand Anderson, the assessors of Mr. Steill's trustees, being of opinion that, notwithstanding the ability displayed by several of the competitors, there is no one of the models which in its present state they could be justified in recommending to the trustees for adoption, the trustees resolved that they would not be warranted in carrying out any of the designs as submitted; but in respect of the merit exhibited by No. 4 ('Patriot'), No. 6 ('Spes'), and No. 14 ('Fortiter'), agreed to allow their authors, if so disposed, to submit revised models, which the trustees may or may not accept as they see fit, but for which, in case of non-acceptance, they shall allow to each author the premium of fifty guineas, and defer for future consideration what course shall be followed in case none of the revised models shall be accepted."



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, JULY 19, 1884.

### EDITORIAL NOTICES.

The authors of signed articles and papers read in public must necessarily be held responsible for their contents.

No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.

Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.

### TENDERS, ETC.

\* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

\* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—"Contract Supplement to THE ARCHITECT."

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### COMPETITIONS OPEN.

RUGELEY.—July 19.—Designs are required for Additions and Alterations at Grammar School. Mr. Robert Landor, Clerk to the Governors, Rugeley.

NORTH SHIELDS.—Aug. 18.—Plans are required for Alterations and Additions to the Workhouse. Mr. Christopher Scott, Guardians' Hall, North Shields.

### CONTRACTS OPEN.

ASHBOY.—July 26.—For Building Schools. Mr. W. Hague, Architect, 62 Dawson Street, Dublin.

BANBURY.—August 5.—For Building Three Shops and Cottage. The Banbury Co-operative Industrial Society.

BELFAST.—July 19.—For Erection of Shops in Smithfield Market. The Borough Surveyor, Town Hall, Belfast.

BERWICK-ON-TWEED.—July 19.—For Building Two Dwelling-houses. Mr. W. Gray, Architect, Berwick.

BIRMINGHAM.—Aug. 28.—For Erection of Kitchen and other Buildings at the Workhouse. Mr. W. H. Ward, Architect, Paradise Street, Birmingham.

BRADFORD.—July 21.—For Building Shop Premises. Mr. George Milnes, 4 Midland Road, Bradford.

BRENTWOOD.—July 19.—For Building Retort-house at Gasworks. Mr. Jabez Church, 17b Great George Street, Westminster.

BRISLEY.—July 21.—For Building Small Farmhouse. Mr. John Dunt, Surveyor, Great Withingham.

BRISTOL.—For Additions to St. Jude's Church. Mr. E. H. Edwards, Architect, 5 Clare Street, Bristol.

BURY.—July 21.—For Building Sheds, Fernhill. Mr. J. Cartwright, Borough Surveyor, Bury.

BWLCHGWYN.—July 21.—For Building Parsonage, Stable, and Boundary Walls. Mr. J. E. Lash, Architect, 1 High Street, Wrexham.

CARLISLE.—For Building Stables, Waggon and Van Sheds. Mr. T. Taylor Scott, Architect, 14 Bank Street, Carlisle.

CUPAR.—July 22.—For Building Cottage, Westpark. Mr. David Milne, Architect, Cupar.

DEPTFORD.—July 22.—For Building Hay Stores at Foreign Cattle Market. Drawings at the Architect's Office, Guildhall.

DISHFORTH.—July 25.—For Additions to Church. Mr. George Mallinson, Architect, Hutton Conyers, Ripon.

DODDINGHURST.—July 21.—For Additions to All Saints' Church. Rev. F. Stewart, Rectory, Doddinghurst, near Brentwood, Essex.

GLOUCESTER.—July 24.—For Additions and Alterations at General Infirmary and Eye Institution. Messrs. Waller, Son & Wood, Architects, 17 College Green, Gloucester.

GREAT YARMOUTH.—July 22.—For Building House. Mr. Sidney Rivett, Architect, Southtown, Great Yarmouth.

GUILDFORD.—For Building Schools at Charlotteville. Mr. W. G. Lower, Architect, High Street, Guildford.

GUILDFORD.—For Erection of School Buildings at Stoughton. Mr. S. Welman, Architect, High Street, Guildford.

HEREFORD.—July 21.—For Erection of Cottage and Building on Corporation Farm, Tupsley. Mr. J. Parker, City Surveyor, Hereford.

HORNSEY.—July 31.—For Additions to Local Board Offices. Mr. T. de Courcy Meade, Surveyor to the Local Board, Southwood Lane, Highgate, N.

HOMERTON.—July 23.—For Finishing Nine Houses Clapton Park. Mr. R. A. James, 38 Finsbury Pavement, E.C.

LEEDS.—July 21.—For Erection of Restaurant Buildings, Mr. C. S. Nelson, Architect, Albert Chambers, Park Row, Leeds.

LIVERPOOL.—July 21.—For Building Station, with Hotel, Shops, and Offices. Mr. H. Shelmerdine, Architect, Exchange Station, Liverpool.

MAIDSTONE.—July 24.—For Additions to Ophthalmic Hospital. Mr. E. W. Stephens, Architect, West Borough Chambers, Maidstone.

NEWBURY.—Aug. 4.—For Building School and Master's House for Governors of St. Bartholomew's Grammar Schools. Mr. J. P. Power, Architect, 67 Basinghall Street, E.C.

NORTHMOLTON.—Aug. 6.—For Repairs and Reseating Church. Mr. E. Ashworth, Architect, Exeter.

OXFORD.—July 21.—For Building Villa Residence. Mr. A. H. Wills, Architect, City Chambers, Exeter.

PETERBOROUGH.—July 19.—For Building Cottages, &c. Mr. H. M. Townsend, Architect, The Precincts, Peterborough.

SHEFFIELD.—July 22.—For Casual Wards and other Buildings at the Workhouse. Mr. James Hall, Architect, Paradise Square, Sheffield.

STAMFORD.—July 19.—For Additions to Tramp Day Ward at Workhouse. Messrs. J. & C. Richardson, Architects, 15 Barn Hill, Stamford.

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

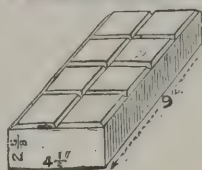
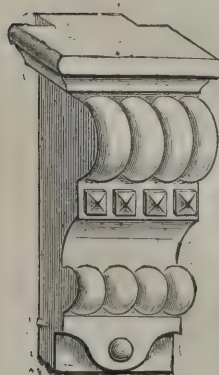
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WEST VALE.—July 28.—For Building Sunday School, Mr. W. H. D. Horsfall, Architect, Albany Chambers, Halifax.

WILLESDEN.—July 21.—For Building Manufacturing Premises and Dwellings. Mr. W. D. Bullis, Surveyor, 21 Finsbury Pavement, E.C.

WORKINGTON.—July 22.—For Building Board School, Boundary Wall, Dwelling House, &c. Mr. G. D. Oliver Architect, 44 Pow Street, Workington.

WORTLEY.—July 28.—For Erection of Schools, Out-buildings, and Boundary Walls. Mr. R. L. Adams, Architect, Imperial Buildings, Bond Street, Leeds.

## TENDERS.

### BRIDLINGTON QUAY.

For Cinder-track, Pavilion, Ticket-boxes, &c., on the Recreation Ground, for the Bicycle Club. Mr. J. EARNSHAW, Architect, Wellington Road, Bridlington Quay.

Rennard . . . . . £310 0 0  
Bailey & Warkington . . . . . 301 4 6  
LEESON (accepted) . . . . . 275 0 0

For Alterations to No. 19 King Street, Bridlington Quay, for R. Allen & Co. Mr. J. EARNSHAW, Architect, GRAY (accepted)

For Alterations to Sail Loft, New Walk, Bridlington Quay, for Mr. R. Scrivener. Mr. J. EARNSHAW, Architect.

Rennard . . . . . £68 0 0  
Leeson . . . . . 64 15 0  
Mainprize . . . . . 60 0 0  
CLARK (accepted) . . . . . 49 19 0

For Relaying Drain in New Burlington Road, Bridlington Quay. Mr. J. EARNSHAW, Architect, MAINPRIZE (accepted).

### BROMSGROVE.

For Erection of Infirmary at the Workhouse, Bromsgrove. Mr. CHARLES A. EDGE, Architect.

Wells & Sons, Worcester . . . . . £5,582 6 4  
Thomson, Kidderminster . . . . . 5,087 11 9  
W. Jones, Gloucester . . . . . 4,980 0 0  
Jones & Sons, Sedgley . . . . . 4,900 0 0  
Read & Sons, Bromsgrove . . . . . 4,714 10 0  
Surman, Redditch . . . . . 4,580 0 0  
Bennett, Birmingham . . . . . 4,444 0 0  
Hinns & Sons, Redditch . . . . . 4,281 0 0  
Brazier & Weaver, Bromsgrove . . . . . 4,274 0 0  
Greenswood, Mansfield . . . . . 4,041 0 0  
TILT & FISHER, Bromsgrove (accepted) . . . . . 3,927 16 0

### CALNE.

For Erection of Three New Shops, with Dwelling-houses and Store-rooms, at Calne, Wilts (exclusive of Smiths' Work and Ironmongery, which will be supplied by the Proprietors), for Messrs. Wilkins & Son. Mr. FRED BARTU, A.R.I.B.A., F.S.I., Architect, Salisbury, and 342 Strand, London, W.C.

Excavators, Bricklayers, Masons, Slaters, and Plasterers.  
J. Weston . . . . . £965 0 0  
G. Weston . . . . . 840 0 0  
E. Weston . . . . . 654 0 0  
Sutton . . . . . 635 8 0  
BEAZLEY (accepted) . . . . . 635 0 0

### Carpenters and Joiners.

Chivers . . . . . 560 0 0  
DREV (accepted) . . . . . 395 0 0

### Plumbers, Painters, and Glaziers.

Fortune . . . . . 98 0 0  
Stanley . . . . . 85 17 0  
STEVENS (accepted) . . . . . 65 18 0

### CARDIFF.

For Additions and Alterations to St. Mellon's Vicarage, near Cardiff. Mr. PETER PRICE, Architect, Cardiff. Quantities by the Architect.

DAVIES (accepted) . . . . . £1,183 0 0

For Additions and Alterations to the Turkish Baths, Charles Street, Cardiff. Mr. PETER PRICE, Architect. Quantities by the Architect.

Shepherd . . . . . £729 0 0  
Jones Bros. . . . . 720 0 0  
D. Davies . . . . . 715 0 0  
Job Thomas . . . . . 695 0 0  
Gough . . . . . 659 0 0  
Jeffries . . . . . 626 0 0  
JOSEPH THOMAS (accepted) . . . . . 619 0 0

For New Business Premises in the Hayes, Cardiff, for Messrs. Morgan & Co., Drapers. Mr. PETER PRICE, Architect. Quantities by the Architect.

D. J. Davies . . . . . £5,609 0 0  
Gray . . . . . 4,974 0 0  
Jones Bros. . . . . 4,899 0 0  
D. Davies . . . . . 4,850 0 0  
Lock . . . . . 4,849 0 0  
Symonds . . . . . 4,800 0 0  
Shepton . . . . . 4,560 0 0  
Gough . . . . . 4,313 0 0  
EVANS (accepted) . . . . . 4,115 15 0

For Erection of Warehouses, Nos. 13, 14, and 15 Working Street, Cardiff, for Mr. N. Rees. Mr. J. P. JONES, Architect, 27 Park Street, Cardiff. Quantities by the Architect.

Symonds . . . . . £3,730 0 0  
Jones Bros. . . . . 3,550 0 0  
D. J. Davies . . . . . 3,500 0 0  
D. Davies . . . . . 3,490 0 0  
Shepton & Son . . . . . 3,445 10 0  
Lewis . . . . . 3,400 0 0  
LOCK (accepted) . . . . . 3,388 0 0

### KIDDERMINSTER.

For Building Science School, Kidderminster. Mr. J. M. GETHING, Architect. Quantities by the Architect.  
Howard & Sons . . . . . £3,834 0 0  
Thompson . . . . . 3,767 18 0  
Guest . . . . . 3,572 0 0  
Smith . . . . . 3,421 0 0  
Binnian & Son . . . . . 3,350 0 0  
Dorse & Son . . . . . 3,195 8 10  
BENNETT, Birmingham (accepted) . . . . . 3,134 0 0

### LLANGRANOG.

For Alterations and Additions to the Parish Church, Llangranog, Cardiganshire. Mr. E. H. LINGEN BARKER, Architect.

Davies & Son, New Quay . . . . . £950 0 0  
Shepherd, Cardiff . . . . . 688 0 0  
Davies & Jones, Cardigan . . . . . 674 0 0  
GILES, Carmarthen (accepted) . . . . . 669 0 0

### LONDON.

For Rebuilding No. 6A West Street, Soho, for Mr. R. Hovenden.

Bywaters . . . . . £1,436 0 0  
Conder . . . . . 1,399 0 0  
Downs . . . . . 1,377 0 0  
Ashby Bros. . . . . 1,363 0 0  
Longmire & Burge . . . . . 1,275 0 0  
Scrivener . . . . . 1,209 0 0

For Erection of New Premises at No. 5 West Street, Soho, for Mr. J. Osborne. Messrs. HOOKER & HEMMINGS, Architects. Mr. T. Ladds, Surveyor.

Johnson . . . . . £1,565 0 0  
Conder . . . . . 1,521 0 0  
Longmire & Burge . . . . . 1,475 0 0  
Ashby Bros. . . . . 1,458 0 0  
Bywaters . . . . . 1,456 0 0  
Downs . . . . . 1,415 0 0  
Scrivener . . . . . 1,353 0 0

For Rebuilding No. 9 Prince's Street, Cavendish Square, for Mr. W. A. Michell. Mr. W. J. MILLER, Architect.

Bangs & Co. . . . . £2,245 0 0  
Conder . . . . . 2,147 0 0  
Patman & Fotheringham . . . . . 2,123 0 0  
Kelly & Son . . . . . 1,948 0 0  
Manning . . . . . 1,865 0 0

For Erecting Model Dwellings, Road Drain, &c., at Stoke Newington, for the Metropolitan Association for Improving the Dwellings of the Industrious Classes. Messrs. DAVIS & EMANUEL, Architects. Mr. F. Downing, Surveyor.

Holliday & Greenwood . . . . . £12,193 0 0  
Macey & Sons . . . . . 12,063 0 0  
Williams & Sons . . . . . 11,983 0 0  
Conder . . . . . 11,790 0 0  
Mowlem & Co. . . . . 11,619 0 0  
Colls & Sons . . . . . 11,617 0 0  
Brass . . . . . 11,493 0 0  
Woodward . . . . . 11,399 0 0  
Lawrance . . . . . 11,124 0 0  
Grover . . . . . 10,843 0 0

For Additions and Sundry Works at the Coleman Street Ward Schools, London Wall, E.C. Mr. J. E. SAUNDERS, Architect.

Heaps . . . . . £531 0 0  
Richardson . . . . . 524 0 0  
Minchin . . . . . 514 0 0  
Woodward . . . . . 480 0 0  
COLLS (accepted) . . . . . 470 0 0

For Decoration and Sanitary Work, Kensington High School for Girls, 152 and 154 Cromwell Road, S.W., for the Girls' Public Day Schools. Mr. J. O. SMITH, A.R.I.B.A., Architect.

RHODES (accepted) . . . . . £169 0 0

For Building Board School, Broad Street, Ratcliffe. Mr. E. R. ROBSON, Architect.

F. & F. J. Wood . . . . . £19,683 0 0  
Outhwaite & Son . . . . . 19,294 0 0  
Shurmur . . . . . 18,954 0 0  
Downs . . . . . 18,671 0 0  
Tongue . . . . . 18,668 0 0  
Kirk & Randall . . . . . 18,637 0 0  
Patman & Fotheringham . . . . . 18,600 0 0  
Perry & Co. . . . . 18,513 0 0  
Bangs & Co. . . . . 18,450 0 0  
Scrivener . . . . . 18,406 0 0  
Grover . . . . . 18,380 0 0  
Priestley & Gurney . . . . . 18,374 0 0  
Wall . . . . . 18,340 0 0  
Wall Bros. . . . . 18,307 0 0  
Jerrard . . . . . 18,290 0 0  
Cox . . . . . 18,267 0 0  
Holloway . . . . . 18,250 0 0  
Atherton & Latta . . . . . 18,200 0 0  
Oldrey . . . . . 18,000 0 0

For Enlargement of Board School, Plumstead Road. Mr. E. R. ROBSON, Architect.

Goodman . . . . . £1,997 0 0  
Bangs & Co. . . . . 1,824 0 0  
Jerrard . . . . . 1,791 0 0  
Kirk & Randall . . . . . 1,790 0 0  
Wall Bros. . . . . 1,762 0 0  
Priestley & Gurney . . . . . 1,757 0 0  
Longman Bros. . . . . 1,733 0 0  
Tongue . . . . . 1,625 0 0

For Enlargement of Board School, Tanner's Hill. Mr. E. R. ROBSON, Architect.

H. L. Holloway . . . . . £4,573 0 0  
J. Holloway . . . . . 4,516 0 0  
Patman & Fotheringham . . . . . 4,516 0 0  
Bangs & Co. . . . . 4,451 0 0  
Lathey Bros. . . . . 4,426 0 0  
Atherton & Latta . . . . . 4,393 0 0  
Tongue . . . . . 4,327 0 0  
Jerrard . . . . . 4,296 0 0  
Wall Bros. . . . . 4,269 0 0  
Priestley & Gurney . . . . . 4,221 0 0

For School-keeper's House, Cookery Centre, and Enclosing Playground, Olga Street Board School. Mr. E. R. ROBSON, Architect.

F. & F. J. Wood . . . . . £1,395 0 0  
Cox . . . . . 1,350 0 0  
Sergeant . . . . . 1,337 0 0  
Atherton & Latta . . . . . 1,330 0 0

### LONDON—continued.

For Painting Board Schools.

Cook's Ground.  
Lathey Bros. . . . . £560 0 0  
King . . . . . 474 0 0  
Nightingale . . . . . 381 0 0  
Johnson . . . . . 371 0 0  
Kearley . . . . . 335 0 0

### Harwood Road.

Lathey Bros. . . . . 437 0 0  
King . . . . . 385 0 0  
Johnson . . . . . 319 0 0  
Nightingale . . . . . 279 0 0  
Stimpson & Co. . . . . 270 0 0  
Kearley . . . . . 236 0 0

### Worlington Road.

Pe'chy . . . . . 500 0 0  
Oldrey . . . . . 490 0 0  
Stimpson & Co. . . . . 360 0 0  
Kearley . . . . . 348 0 0

### Cottenham Road.

Kirby & Chase . . . . . 373 0 0  
McCormick & Sons . . . . . 318 0 0  
Goodman . . . . . 299 0 0  
Shurmur . . . . . 288 0 0

### Central Street.

Grover . . . . . 280 0 0  
McCormick & Sons . . . . . 197 0 0  
Shurmur . . . . . 186 0 0  
Snewin Bros. & Co. . . . . 126 0 0

### York Road.

Shurmur . . . . . 432 0 0  
Williams & Son . . . . . 429 0 0  
Grover . . . . . 404 0 0  
Willmott . . . . . 397 0 0  
McCormick & Sons . . . . . 316 0 0

### Hughes Fields.

Holding & Son . . . . . 273 0 0  
Johnson . . . . . 255 0 0  
Jerrard . . . . . 224 0 0  
Davis . . . . . 212 16 0  
Pitchford . . . . . 196 0 0  
Tongue . . . . . 180 0 0

### Creek Road.

Holding & Son . . . . . 338 0 0  
Jerrard . . . . . 250 0 0  
Johnson . . . . . 245 0 0  
Pitchford . . . . . 206 12 0  
Tongue . . . . . 191 0 0  
Davis . . . . . 184 12 0

### Kender Street.

Pitchford . . . . . 344 5 6  
Jerrard . . . . . 330 0 0  
Higgs . . . . . 325 10 0  
Petchy . . . . . 295 0 0  
Nightingale . . . . . 279 0 0

### British Street.

Reed . . . . . 297 0 0  
Atherton & Latta . . . . . 245 0 0  
Liman . . . . . 240 0 0  
Derby . . . . . 169 0 0  
Vigor & Co. . . . . 160 10 0

### Horseferry Road.

Petchy . . . . . 251 0 0  
Higgs & Hill . . . . . 229 0 0  
Lathey Bros. . . . . 210 0 0  
Nightingale . . . . . 195 0 0  
Kearley . . . . . 175 0 0

### Willmot Street.

Cox . . . . . 970 0 0  
Willmott . . . . . 961 0 0  
Grover . . . . . 703 0 0  
Snewin Bros. & Co. . . . . 549 0 0  
F. & F. J. Wood . . . . . 460 0 0

### Olga Street.

F. & F. J. Wood . . . . . 425 0 0  
Flaxman . . . . . 400 0 0  
Shurmur . . . . . 378 0 0  
Steel Bros. . . . . 351 17 0  
Atherton & Latta . . . . . 349 0 0  
Vigor & Co. . . . . 315 10 0

### Henry Street.

Oldrey . . . . . 273 0 0  
Goodman . . . . . 268 0 0  
Petchy . . . . . 252 18 7  
Knight & Walden . . . . . 246 0 0

### Hawley Crescent.

Grover . . . . . 266 0 0  
Petchy . . . . . 255 14 2  
Wall Bros. . . . . 255 0 0  
Willmott . . . . . 243 0 0  
Goodman . . . . . 235 0 0  
Knight & Walden . . . . . 227 0 0  
Shurmur . . . . . 198 0 0

### Newcastle Street.

Goodman . . . . . 230 0 0  
Kirby & Chase . . . . . 210 0 0  
Tait & Co. . . . . 185 10 0  
McCormick & Sons . . . . . 182 10 0  
Shurmur . . . . . 173 0 0

### Harper Street.

Higgs & Hill . . . . . 315 0 0  
Knight & Walden . . . . . 311 0 0  
Nightingale . . . . . 246 0 0

### Baltersea Park.

Lathey Bros. . . . . 525 0 0  
Higgs & Hill . . . . . 413 0 0  
Mallett . . . . . 391 0 0  
Nightingale . . . . . 343 0 0  
Johnson . . . . . 334 0 0

### Haverstock Hill.

Willmott . . . . . 477 0 0  
Wall Bros. . . . . 351 0 0  
McCormick & Sons . . . . . 329 10 0  
Snewin Bros. & Co. . . . . 316 0 0  
Knight & Walden . . . . . 290 0 0



### LONDON—continued.

For Painting Board Schools.

Munsfield Place.		
Williams & Son	£330	0 0
Petchy	305	11 9
Wall Bros.	297	0 0
Knight & Walden	233	0 0
Monnow Road School.		
Nightingale	377	0 0
Jerrard	340	0 0
Farracombe Street.		
Flaxman	312	0 0
Atherton & Latta	295	0 0
Coombe	259	0 0
Riley Street Schools.		
Stanley & Sons	425	9 0
Higgs	305	0 0
Roy	249	0 0
Greenwood	242	10 0
Nightingale	232	0 0

### For Cleaning, Colouring, &c., Board Schools.

Broad Street.		
Derby	£128	0 0
Coombe	125	0 0
Vigor & Co.	112	0 0
Ben Jonson School.		
Shurmur	495	0 0
Derby	355	0 0
Atherton & Latta	344	0 0
Thomas Street.		
Snwin Bros.	126	0 0
Hilley Street.		
Tait & Co.	146	0 0
Reed	135	0 0
Derby	129	0 0
Vigor & Co.	110	0 0

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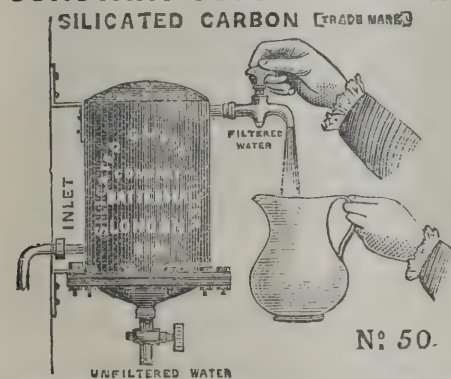
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Holding & Son	241	0 0
Pitchford	225	0 0
Jerrard	210	0 0
Scrutton Street.		
McCormick & Sons	169	0 0

### MELDEN.

For the Restoration of Melden Church, near Rhyl. Mr. ARTHUR BAKER, Architect, 14 Warwick Gardens, Ken- sington.		
Miller, Holywell	£1,476	0 0
Hughes & Son, Glan Conway	1,240	0 0
R. R. Williams, Carnarvon	1,150	0 0
Griffiths, Rhyl	1,045	0 0
Midland Joinery Co., Birmingham	1,012	0 0
Torkington, Rhyl	998	0 0
J. P. Williams, Ruthven, exclusive of repairs of roof timbers	997	17 0
Architect's estimate	1,000	0 0

### NEWARK.

For Erection of Auction Room, Kirk Gate, Newark, for Mr. Edward Bailey. Mr. GEORGE SHEPPARD, Borough Surveyor, 9 Kirk Gate, Newark.		
Brown & Sons	£310	0 0
Baines	287	0 0
Crossland	275	0 0
Smith & Lunn	274	0 0
Mackenzie & Sons	270	10 0
Duke	270	0 0
Coombes	238	0 0

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Evans, Portdinorwic	£4,495	0 0
Griffith, Portdinorwic	2,197	0 0
Williams, Bangor	1,723	0 0
Griffiths & Thomas, Bethesda	1,691	0 0
Bagbird, Carnarvon	1,661	0 0
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LEWIS, Portdinorwic (accepted)	1,480	0 0

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Wort	720	0 0
Harris	710	0 0
Dawkins	710	0 0
Dolman	700	0 0
Tryhorn	698	0 0
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HALE (accepted)	630	0 0

### WAKEFIELD.

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Summers	2,475	7 0
Fawcett	2,335	0 0
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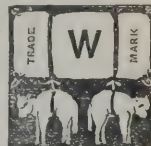
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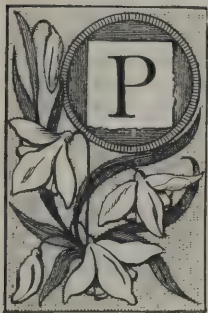


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Saturday, July 19, 1884.



# The Architect.

## ARCHITECTURAL SPONTANEITY.



PERHAPS—although some of us are now beginning to encourage a little more of patriotic doubt about it—the architecture of London may still require to be excused as much as we can excuse it; but at any rate it has one characteristic which, as its merit improves, becomes more recognisable as a virtue of reality—indeed, an artistic virtue however accidental—namely, its spontaneity. Britons, of course, never can in anything be slaves; but they may take credit for perfect seriousness if they claim for the architectural

*ensemble* of their towns, when compared with certain foreign towns, a sort of freedom from the restraints of discipline, which, whatever faults it may induce, is unquestionably a condition that can be turned to solid advantage. In half a dozen words, one of the chief points of difference between London and Paris consists in the fact that in Paris the buildings are so drilled by authority that no one of them can call its soul its own, whilst in London they are so wholly devoid of such drilling as to be all soul, of such sort as may happen. This contrast, we need scarcely say, has often enough been made, but it may be doubted whether criticism has as yet taken the full benefit of it. What we will venture to lay down, therefore, as an artistic principle, is this: that private indiscipline, that is, individual independence completely asserted, not only may by accident come to be beneficial to the general effect of a town, but must of necessity be so beneficial if individual good taste can be made to take the place of public control. The private building proprietor, in short, if he will consent to subordinate his operations to the control of the artist, may quite safely and quite wisely dispense with the control of the *préfet*; and this it is that produces the quality of individuality or spontaneity of which we are speaking.

In drawing comparisons hitherto between the English towns and the French (more particularly), it is the “monotony” of the French that has been complained of. English people, especially those of a picturesque turn of mind, have allowed themselves to be dreadfully bored by the boulevards. Which ever way they turn, as they have said a thousand times, they see little else than one uniform elevation by the mile; a graceful elevation enough, but so painfully unvaried that its graces are lost in sheer weariness. But this is not the point we desire to make. Spontaneity, if properly estimated, is not a mere negative merit, the absence of monotony; it is a positive virtue, the presence of that essential variety which indicates freedom.

In other words, it is not the monotony, if we may say so, that distresses the English observer, so much as the dragooning of which it is the result. The object in view in the uniformity of Parisian architecture is, of course, not monotony, but discipline; and it would be easy for French dexterity, if such were the order of the authorities, to put this discipline into a form which would not involve anything like monotony. Indeed, we may take leave to express a little wonder in asking why it is that the clever people who administer artistic design in France, publicly and privately alike, have not long ago discovered that the practical outcome of their architectural discipline is scarcely worthy of their artistic resources. No doubt, when the stroller along even the most monotonous of boulevards turns his attention to the diversified design of the gateways and many other such compositions of detail, and regards the general façade, if we may so say, as mere background, he cannot but be charmed with the variety he sees; but he may claim permission to say this is not enough, and he may ask as a very plain question—Why should the general façade be the background, and not the foreground, of the composition?

In London the façade as a whole is so emphatically in the foreground that it constitutes, as a rule, the one subject of design, there being no such special episodes of detail claiming to rivet attention upon themselves. We cannot assert that on this account the artistic merit of the general composition is always so carefully considered as it ought to be; but, such as it is, the best is made of it that the architect can do; and the

result is that each edifice becomes an independent work for what it is worth; and, instead of stately ranges of uniform building, which, as great joint-stock properties, are doubtless sufficiently imposing, we have an undisciplined variety of individual productions, each one claiming its own place and its own importance; and the aggregate effect thus rises to a dignity, if matters are rightly managed, which is entirely different and perhaps superior.

As a typical example of combined façades in London, we need only refer to the terraces of the Regent's Park. In the days of the Regency these compositions, albeit that they are of painted cement instead of stone, were much esteemed, and as a whole, even now, we cannot fairly call them otherwise than elegantly designed. In this case, it is true, as in all others, our inveterate habit of spoiling the skyline has long ago so effectually counteracted the discipline of the original architecture, that even the further outrage of varying the colour of the paint to suit the individual tastes of occupiers scarcely adds to the chaos; but at any rate we need only remark that this is perhaps the best we have to show in the way of uniformity, and that it is not so much to boast of as we could wish.

As a contrast we may refer to the new Northumberland Avenue. Here, it will be remembered, the legislature took a fancy to provide for some sort of artistic discipline. The Metropolitan Board was required by Act of Parliament to refer all designs for building on this new thoroughfare to the Council of the Royal Institute of Architects for approval; and it is safe to suppose that the idea in the Parliamentary mind was something like an expectation that the Avenue would thus become a short but grand “boulevard,” in respect of symmetry if not uniformity. The result, as we now see, is altogether different. What was done *in camera* by the Council of the Institute nobody very clearly knows, because of the singular affectation of imperialism which had taken possession of that little world of art; perhaps it is on this very account that the Metropolitan Board was understood to have declined to accept its advice; but at any rate what we now see in the buildings of Northumberland Avenue is a striking example of true English indiscipline in what we may perhaps consent to call its best form. The edifices are large, costly, and stately, but no adventitious aid to effect is sought for in the adoption of the partnership principle. Each building is a separate composition, and it can scarcely be denied that the appearance of grandeur, instead of being lessened, is much enhanced. Dragooning is notably and positively absent. Independent individualism reigns. Spontaneity is the spirit of the whole. The many works are not in any way one, but in every way many; and if the mere bulkiness of design is not accomplished as it might have been, the value of the aggregate is all the greater, even in the very arithmetical quantity of artistic design presented for the contemplation of the spectator.

With modern Gothic critics the elements of spontaneity would be made to go much farther than this. Their notion of a typical mediæval street is that it was, if not perhaps purposely crooked, beyond all doubt naturally so. The natural line of a bridle-path across the waste is, as all the world knows, a crooked line; and thus it happens that a genuine old street in a genuine old town is almost always more or less out of the straight. This is the general spontaneity, therefore, of the art of laying out streets; and it obviously tells in the same direction as the individual spontaneity by virtue of which the several edifices in the street universally claimed in mediæval times the right to be as unlike each other as they pleased. But none but an enthusiast would approve this characteristic now. And yet, if we compare the disposition of London with that of Paris, in view of this condition as an artistic consideration, may we not, in spite of all our shortcomings, take credit to ourselves for an instinct of spontaneity which has made London capable of becoming a much more charming town, as English art improves in the future, than we may now suppose it possible to be?

Perhaps the case may be put simply thus: that the English instinct of independence shows itself in architecture as in everything else; first, in the acceptance, without reproach, of unconventional lines of streets; secondly, in the recognition of the virtue of individuality in separate buildings; and thirdly, therefore, in the repudiation of the disciplinary elements of regularity and uniformity when they have no other object than superficial order. If this be right, then we have only to add that, within reasonable limits, such spontaneity need never interfere with the qualities of grace, except to facilitate their exercise and augment their effect.



## WESTMINSTER HALL.

WE regret exceedingly that we cannot endorse the proposals of Mr. PEARSON with regard to the future treatment of Westminster Hall, as we can heartily commend his careful examination into and report upon its past. We fear that the antiquarian view of the subject has overborne with him the architectural and artistic, which was not unlikely to happen to so conscientious a custodian of ancient buildings, after the necessarily long and anxious research into all the historical evidences, documentary and actual, of so complex a puzzle as that presented to him.

He tells us that in making his plans for the reconstruction of the west side of the hall it has been his object consistently with present requirements to recover the aspect which it presented in RICHARD II.'s time, and also to retain the existing evidences of earlier and later historical work.

Laudable as doubtless was this endeavour, and suitable as a theme to exercise intellectual students, success in it was both impossible and undesirable—impossible, as is proved by Mr. PEARSON's design itself, which would make RICHARD rub his eyes with astonishment were he, Rip-van-Winkle-like, to revisit the scene of his architectural labours; and undesirable because present circumstances are altogether different, and the requirements of this day various from those of his time.

The difficulties of the archæological problems involved have been most ably and patiently investigated by Mr. PEARSON, and we shall endeavour in a later portion of this paper to explain their entrancing interest, but those of the architectural side of the question are a Gordian knot that needs a different method of solution.

The unveiling of this noble hall of RICHARD II., at the recent removal of the unsightly Law Courts, which had previously almost obliterated it from view, was a revelation; and the effect upon the two grand groups of buildings of the space thus gained—the Abbey, with St. Margaret's, on one side, and of the Houses of Parliament on the other—scarcely less than magical. St. Margaret's Street—or "Lane," as it used to be called, and but a lane it was as a separation between two such mighty piles of building—seemed expanded to due proportions; and from all points of view, particularly as approached from the north, the two splendid groups of structures stood out distinctly and with independent dignity, which was not the case when the buildings of the Law Courts nearly made them continuous. Then the majesty of the proportions of the hall externally, seen for the first time, at any rate, in our generation, asserted themselves, notwithstanding their dilapidation and the squalor of their present surroundings; and their comparative plainness was a relief to the over-ornate character of Sir CHARLES BARRY's portion of the Houses of Parliament with which it has become incorporated.

Mr. PEARSON's design for the reconstruction of the west side of the hall would practically undo all the advantages so gained by the removal of the Law Courts. The flank wall of the hall, with its fine windows, would in perspective, from most points of view, be again obliterated by the double-storeyed cloister he proposes to rebuild between the buttresses; and the building he suggests to advance on the foundations of the old Exchequer Courts, westward from the north-western angle of the hall, would go far to reduce St. Margaret's Street to a lane again, at least in effect. As a wing to the Parliament buildings, and continuation of the quadrangular character of Palace Yard, it is too low in elevation to be in any degree sufficiently dignified, nor is its architectural detail in keeping with them.

It may be, we will concede that it is a fact, that buildings did exist in RICHARD II.'s time upon these very foundations, and that there is actual evidence that the cloister, if cloister it could be called, was of two storeys. The hall was not then a part, and the most prominent part, of such a pile of building as that now existing. We know that kitchens and like offices were needed in its vicinity when its principal purpose was that of a banqueting hall. Such is not now the case, and there is no need for appurtenances of a comparatively mean character to be placed in the front of such a structure as the Houses of Parliament. What appurtenances these were that existed, despite all Mr. PEARSON's ingenuity in unravelling their well nigh inextricable fragments, they were not, judging by the sketches preserved of them, of much architectural character, but were probably considered as mere utilitarian excrescences, done, as everything then was done, with good if not pretentious detail.

Whereas the side of the hall itself, with its well moulded windows, is treated as if it certainly was intended to be seen.

Whether or not this were the case, our contention is that it should be seen now, and the noble buttresses also, as are those of the abbey chapter-house opposite. The cloister-like wall between the buttresses might be carried up one storey without detriment to the hall, but we have no hesitation, after looking at Mr. PEARSON's section of the two-storeyed arrangement, in saying that it can never have been so contemplated by RICHARD II., seeing that the fine arches of the flying buttresses are cut off midway by the roof, leaving the portion above in view and yet incomplete, and the lower portion with its ornamental corbel buried within what is practically but an attic.

When, therefore, Mr. PEARSON proposes "to rebuild the wall between the buttresses in its original position, making an open cloister," we are with him, but as regards "a gallery over it extending nearly the whole length of the hall," we are at issue, seeing that there is no adequate purpose for it, and that it would entirely conceal the fine windows of the hall itself.\* Now that, however, such a cloister will be a principal feature of the building, we should propose that it should be in architectural detail worthy of its position, and not necessarily, as RICHARD may have thought sufficient for his sculleries, "formed of a series of arches which are not only suggested by the wall arches inside, but by the existing jambs found against the large buttresses."†

We have already expressed our deliberate opinion as to the advisability of the proposed building on the site of the old Exchequer Court, and given our reasons for the same. Mr. PEARSON says with regard to this: "On the foundation of HENRY III.'s work I have shown a two-storeyed building projecting westward, of the same height as the cloister, but with a high-pitched roof and gable, towards St. Margaret's Church. This I have designed in character with RICHARD II.'s work, considering the data insufficient to warrant any attempted restoration of the original work of HENRY III. I may mention incidentally that a building with a high-pitched roof existed here formerly in this position." Here would be a puzzle for RICHARD's ghost, who is to see it not as he saw it, but as he would presumably have built it. And yet, in another place we are told that the former building was of three storeys.

When this building existed it was not over-matched by BARRY's structure on the other side of the hall and around Palace Yard, and it is in consideration of these altered circumstances that we think its reconstruction undesirable. Then, again, we might well ask, as doubtless the honourable members will ask, *Cui bono?*

We are told that—

"The lower floor of this is arranged to form a stand for horses, to supply the purpose of a shed at present existing in the same position.

"The upper floor might be one large chamber similar to the old Exchequer Court, and there will be ingress to it by a flight of steps from the hall, and also an approach from New Palace Yard by an octagonal turret at the north-west angle, which will occupy a position not far from one built by Elizabeth.

"The use of this chamber will depend upon those to which the gallery over the cloisters is put.

"As for these uses the gallery can, if desired, be divided into rooms by partitions, there being access by a continuous passage, lighted from the roof. These rooms can be approached by the stairs both at the north and south ends of the hall."

Now the isolated position of this room, with or without the gallery attached, will, we think, render it difficult to invent a use for it, and we cannot but think that RICHARD's ghost would be less puzzled, and the hall preferable, without the staircases above suggested, or doorway, with the larger entrances proposed

\* Mr. Pearson, it is only right to say, alleges that "the height of this cloister wall is accurately marked by the returns of the parapet on the buttresses." In our opinion, however, this makes it so much the worse for the buttresses. We agree fully with Mr. Pearson that "the reconstruction of some of the great buttresses of Richard II. is justified on the strongest grounds—those of stability." We only wish that when they have been rebuilt we should be able to see them, arches and all.

† Mr. Pearson has shown three alternative treatments for the cloisters, and says of the third, of a cloister wall of but one storey, "I can conceive of no advantage from this treatment; there is no gain in accommodation, and the elevation is much impaired" (we venture to think the perspective would not be so). "To carry it out would be to discard the distinct evidence which remains of two storeys having formerly existed."



to be made through RUFUS's walls into the cloister, which is only to serve as a covered carriage stand.\*

Mr. PEARSON says he has shown the completion of Sir CHARLES BARRY's work on the north side of St. Stephen's Porch, in such a manner as he believes he himself would have desired to have seen it completed under present circumstances. This is of course right in every way, but for ourselves we should prefer that it should please Mr. PEARSON living, rather than Sir CHARLES BARRY deceased, and we think that if he had cared less for the ghosts of RUFUS and RICHARD II., and more for the artistic harmonising of the Houses of Parliament of to-day, in the work to be erected on old foundations or otherwise, the result would have been better. The fact is archæology is very well in its way, but architecture and art have their claims as well, and these are the stronger so soon as the ancient work has once perished, and the archæological revival must be more or less a matter of conjecture. It is not possible to serve two masters, and it is by the attempt to do so that Mr. PEARSON has, we think, failed in this instance. The Society for the Protection of Ancient Buildings and scraps, the fear of which he seems to have had before his eyes, admit of no compromise. To please its members he must have the buttresses stone and brick as they are, and prop them up if need be with posts, and perhaps place RUFUS's walling under a glass case. But if buildings be needed for architectural effect let them be the best the nineteenth century can produce, not archæological dreams elicited out of a chaos of fragments of divers dates and wholly different uses from those of the present day.

(To be continued.)

### OLD HALLS IN LANCASHIRE AND CHESHIRE.†

IF there be a part of England which may be said to belong to this age of ours, it surely is the counties of Lancashire and Cheshire. Nowhere else are more acres devoted to the big mills which the nineteenth century can claim as its own, and to the big houses which are needed for the display of the riches of the men whom the mills make wealthy. Tall chimneys, dismal skies, a stunted population, and the other marks of a developed civilisation are to be found there in plenty. But as in English institutions a medley of antiquity and newness, of feudalism and individual independence, often is met with, to the bewilderment of foreigners, so the two Palatine counties can show many of the old halls in which English gentlemen dwelt in days when the cotton trade was as little known as the Declaration of Rights. In the very midst of Manchester itself one can still see a house dating from A.D. 1425, and which is as quiet as a monastery, while here and there in Lancashire there are houses which were planned in days when attacks by Welsh and Northern marauders were among the contingencies for which provision had to be made by prudent builders. Water is an element which is unimpressible to archæological considerations, otherwise it would be seen that many a stream which nowadays gives trouble to sanitary inspectors was at one time regarded as a natural moat, and accordingly turned to account, and we may even recognise the principle of co-operation in the remains of the "folds" which small farmers erected as a sort of joint-stock fortification against outlaws. In a word, although the so-called Palatinate may now care little for the past, unless as a measure to show how greatly it has progressed, yet relics have survived, and too much attention can hardly be given to them. Some, unhappily, are doomed already.

Examples of the "Old Halls" which are the chief of those relics have been illustrated in the lithographs of NASH, and in the volumes on Domestic Architecture by TURNER and PARKER, and occasionally one is made the subject of a paper among the transactions of archæological societies. But it was reserved for Mr. HENRY TAYLOR to produce drawings and descriptions possessing the technical accuracy which is only to be imparted by the hand of an architect. His book is one of which every Lancashire man may be proud. The buildings are interesting, whether considered simply from an architectural

or an archæological standpoint, and as revealing something of life in a past age they are valuable to any historian whose researches have a wider limit than the Court circle. In the illustrations more has been thought of fidelity than pictorial effect. We may go so far as to say that the sketches, which are based on measurements, are preferable to photographs. The halls cover a large site, and the grouping can be most readily realised by means of bird's-eye views, and for obtaining them a lens is useless. The drawings are by Messrs. BALDWIN, BELLHOUSE, WILSON, and HOOPER, and the care which they have taken merits recognition.

The general notion which is suggested by the phrase a Lancashire hall is a two-storey building, having walls of stone and timber, long unbroken roofs which correspond with the plan, square windows in which length rather than height predominates, one or more projecting bay windows, and square-headed doorways. There is an absence of pretension in the exterior. Occasionally there are arched doors and arches in the chapel windows, but straight lines prevail both within and without. The timbers in the interior are sometimes shaped into curves, but the stuff was hard, the pieces were large and difficult to handle, and the men had no wish to fritter them away. What we see is essentially carpenters' woodwork, which is better fitted to "outwrestle time" than to attract by prettiness. But such screens as those which belonged to Salmesbury and Rufford suggest that in richness of carving a hall could sometimes vie with a church. Compared with the English dwellings which belong to a later age, those Lancashire halls might be said to come under the head of cottage architecture; but on that account they are not to be undervalued. If we knew all that occurred in connection with the introduction of loftier houses, we should probably discover that the change entailed misery to many people. When Sir THOMAS OVERBURY described his model yeoman, praise was given because "when he builds, no poor tenant's cottage hinders his prospect." The words speak volumes, and suggest how much was sacrificed when two-storey houses went out of fashion. In such a case a tenant may have been sent adrift; but there is a passage in HERRICK which is evidence that when a man was carried away with the desire to have a finer house than his neighbours in the country, he was not over particular about the sources from whence the materials were derived. The poet, addressing Sir LEWIS PEMBERTON, says :—

Safe stand thy walls and thee, and so both will,  
Since neither's height was raised by th' ill  
Of others : since no stud, no stone, no piece  
Was rear'd up by the poor man's fleece ;  
No widow's tenement was racked to gild  
Or fret thy ceiling, or to build  
A sweating closet, to anoint the silk-  
Soft skin or bathe in asses' milk ;  
No orphan's pittance, left him, serv'd to set  
The pillars up of lasting jet,  
For which their cries might beat against thine ears,  
Or in the damp jet read their tears.  
No plank from hallowed altar does appeal  
To yond' star-chamber, or does seal  
A curse to thee, or thine.



If we remember that HERRICK was an epicurean in his life, and was willing to sacrifice his reputation as a clergyman for a dinner or a bottle of wine, it will be evident that the abuses of the age must have become unbearable to have moved him to so much sympathy with people who did not keep skilful cooks. But no indignation could be wrung from the most sensitive by such buildings as the Lancashire halls. The materials are manifestly used for the first time ; there are none of the refinements of pillars or gilding which were requisite in one of the Anglo-Italian mansions, and neither stone nor wood shows any marks of having once formed part of a church. The owners have no reason to fear any inquiry which may be made into the origin of the buildings.

There is, in fact, nothing to show that ostentation had anything to do with the houses ; at the time of their erection safety was considered to be of more importance. It is difficult for us to understand that it was necessary to employ some rudiments of military engineering in selecting a site for an English dwelling-house ; but as, according to Mr. TAYLOR, preference seems to have been given to defensibility, there is no other conclusion. The sites on which the halls stand are divided by him into three classes, viz. : (1) Naturally defensive sites ; (2) sites naturally defensive, and improved by art ; (3)

\* This is 17 feet wide between walls and 14 feet clear carriage way, so that carriages could only pass through it in single file.

† "Old Halls in Lancashire and Cheshire, including Notes on the Ancient Domestic Architecture of the Counties Palatine." With numerous illustrations. By Henry Taylor, Architect. Manchester : J. E. Cornish.



sites made defensive by art alone. It is not improbable that, like churches, the halls stand on the sites of earlier buildings, and the choice would therefore be made by more ancient inhabitants. The absence of security, as well as other causes, induced the dwellers to live as much as possible together, and the hall or common room, therefore, becomes the principal feature in the oldest class of buildings. Its size and position will enable us to judge not only of the transformations of some buildings, but of the age of others. By a careful analysis, Mr. TAYLOR finds that there are six types of dwellings. First, the Early Gothic small manor-house, with the hall in the centre; second, the Elizabethan and Jacobean small manor-house, when the plan was of  form, and the great hall "was used more as an entrance hall than for the meals in common of master and servants;" third, a development of the first forming three sides of a quadrangle, owing to the size of the servants' wing and the provision for a chapel and private chambers; fourth, the quadrangular, the living rooms being "ranged within the wandering lines of the Bailey walls following the natural lines of easiest defence," and the gate-house and chapel forming the fourth side; fifth, the -shaped type, which indicates that a wing had been removed owing to "the abandonment of the custom of dining in common, to a diminished revenue, and perhaps to dilapidations;" sixth, the large manor-house which is quadrangular like Speke Hall. The English hall reached its importance as a common room in the fifteenth century, and Mr. TAYLOR notes a resemblance with the Icelandic hall. We find from a general table of dimensions that Rufford Hall, which had an open-timbered roof, was 46 feet 6 inches in length, and Baguley Hall was 28 feet wide. Among the halls having flat ceilings the greatest length appears to have been 54 feet, as at Hoghton Tower, and the width of Speke Hall is 34 feet 6 inches. Mr. TAYLOR gives twelve plans drawn to the same scale which suggest that there was no fixed rule about the positions of the bays, angles, passages, and high tables. In some halls a minstrels' gallery existed; the high table was placed under a canopy, and amidst the plainness there was enough to suggest the affluence of the owners. No wonder the change was regretted when fashion, according to the ballad, insisted on

A new-fashioned hall, built where the old one stood,  
Hung round with new pictures that do the poor no good;  
With a fine marble chimney, wherein burns neither coal nor wood,  
And a new smooth shovel-board whereon no victuals stood.

It must have been no easy operation to heat one of the halls by means of wood fires, and the ingles are therefore sufficiently capacious to contain abundance of material and to give room for seats. Mr. TAYLOR believes that the steeply-pitched and lofty roofs in the earlier halls were constructed to allow the smoke from a central fire or brazier to ascend with the least annoyance to the inmates.

A chapel appears to have formed a part of the principal halls. Mr. TAYLOR says that, without much research, he has been able to collect notes respecting no less than fifty domestic chapels in Lancashire and Cheshire. Many still exist, and some continue to be used as chapels. In other parts of England the chapel is supposed to have been erected from a desire to discharge the duty of attending religious services with the least personal inconvenience. The chapel, says Sir JOHN CULLUM, when writing about his house in Suffolk, was a room of state much affected by the whole manorial lords, who seem to have disdained attending the parish church. In Lancashire and Cheshire the chapels were a necessity, owing to the large size of the parishes and the distance of the parish church. The chapel suggests the hiding-place, without which a priest could hardly officiate in one of the manor-houses. A good deal of ingenuity was requisite in the construction of those dens, and at Moreton Hall, in Cheshire, we are told that the floor resembles a rabbit-warren or thieves' quarter. The following description will suggest the arrangements:—

The two secret apartments or hiding-rooms are in the little wing at the back of the gatehouse at its north-west corner. They are each about nine feet square, and in all probability served one as the sitting-room and the other as the bedroom of the unfortunate priest or other fugitive who had to be concealed from his pursuers. The only access to these two rooms is by a sliding panel in the north wall of the apartment over the kitchen; but some pressure must have been applied to a stout priest to get him through this narrow aperture. Of such neat manufacture is the panelling, that much time might be spent by the pursuer in discovering that any part of it was movable, or that anything like a door existed in it.

In the westernmost of these secret rooms is a black-looking abyss or shaft about four feet by three feet, and down this hole the fugitive is said to have descended to the subterranean passage under the moat. Mr. Myott, the agent of the property, informs me that this underground passage, passing under the moat, has been followed up for some distance, a chimney-sweep having been employed for the purpose. This passage leads in the direction of a mound which stands not many yards from the south-west corner. I have not personally investigated the facts relating to this underground passage, but in the nature of things it is not improbable that such a means of escape did once exist. On the ground-floor a bricked-up doorway suggests that at one time there was a means of escape from the dark shaft into the garden. It is a noticeable fact that there are small doorways in the walls of all the rooms in the eastern wing and in the rooms of the gatehouse, so that a fugitive could escape to the secret apartments from the furthest end of the building.

There should be many traditions of hair-breadth escapes about those places; but the historical romance has gone out of fashion. HARRISON AINSWORTH knew a good deal about the halls, and he imbibed a love of archæology from his friend the late Mr. CROSSLEY; but although he introduced some of the legends into his novels he was far from exhausting them. One day a writer may arise who is competent to discover how rich Lancashire is in old traditions, and then the halls will rise in interest. At present they are not valued as they deserve. If the buildings were found in some Continental State instead of in Lancashire they would be made the subject of many a learned dissertation, and the character of the work which is found in them would be interpreted as evidence of the good qualities of the men for whom the houses were built. To the historian the plainness of one of those halls is as expressive as the picturesqueness which is met with elsewhere. Mr. TAYLOR gives us the halls as they now stand, and whatever may be their fate his book will always have interest for everyone who cares for English work. He has spared no pains to make his pages attractive as well as useful, and in justice it must be allowed that he has succeeded. The "Old Halls" is the most valuable book on architecture that the English press has produced within the year. The information it contains is of that kind which is not easily acquired, unless when a writer has a subject which arouses his enthusiasm; but in this case the learning has nothing of the dry-as-dust character.

## TEXTILE FABRICS.\*

BY WILLIAM MORRIS.

(Concluded from page 45.)

THE fifteenth century brings us to Florence and Venice, where the splendid cloths were wrought which were used profusely in the magnificent stateliness of the later Middle Ages. This is a part of the subject that wants treating clinically, so to say; that is, we should be alongside some of the fine specimens in the best museums in order to make you understand it properly. Nothing can exceed the splendour of some of these Florentine and Venetian webs, whose speciality was a particular kind of rich velvet and gold, often with one pile raised on the top of another; in these cloths the vellum-twisted gold gives place to gold thread as we know it, but gilded so thickly that it is not uncommon to find specimens where the gold is very little if at all tarnished.

Rich and splendid as these cloths are, they have, to a certain extent, lost some of the imaginative interest of the earlier designs; it would not be true to say that they depend on their material for the pleasure they give, because in these great patterns, founded on vegetation of the thistle and artichoke kind, there is a vigour and freedom that is most delightful and captivating; but they are more architectural and less picture-like than the Sicilian stuffs: the strange monsters, the fairy woods and inland shores, the damsel-peopled castles, palm trees and shells, the lions drinking at the woodland fountain, hawk, swan, mallard, and dove, the swallow and her nestlings, and the hot sun breaking through the clouds; all these wonders and many another have given place to skilfully and beautifully-arrayed leaves and tendrils. As we shall see later on picture-weaving had reached its height by this time, and there was something of a division of labour between the two kinds of weaving design; at the same time the design was absolutely pure and suitable to its purpose—no atom of corruption had crept in.

Now, as to the relation of this design to that of the east; they still marched close together until the false taste of the Renaissance began to affect the later Mediæval work. Throughout

\* A paper read at a Conference at the International Health Exhibition.



there is more of distinct elegance in the eastern work, and that more especially in that kind of design which we call *Persian*.

The sixteenth century saw the change in woven work which fell upon all the architectural arts. I have said that weaving is conservative of patterns and methods, and this is very obvious of this great period of change. One may say that the Oriental-Gothic feeling, which was the very well-spring of fine design in this art, lasted side by side with diverse new fashions, some of which were merely the outcome of the general pseudo-classical feeling, and showed in detail rather than general arrangement of the pattern, and some pieces of fantastic ugliness, which indicated only too surely the coming degradation of the weaving art.

By the first years of the seventeenth century that degradation had befallen the art in Europe; in fact it was becoming, or had become, no longer an art but a *trade*, as we very properly nowadays call work, which is really but an accident of the profit market. I need not therefore trace its degradation further, though that degradation was checked to a certain extent by the traditions of the better times, and some good work was done until the great flood of the vileness of the eighteenth century swamped everything, and prepared the way for the inanity of the nineteenth, which, in its turn, let us hope, is doomed to prepare the way for a new life once more, even in this small corner of the result of man's intelligence—the textile arts.

Having thus gone very briefly through the story of mechanical weaving, I must now turn back to take up the other side of weaving, and talk of it as producing something which we must call pictures for want of a better word. I have said that in the early days of Greek civilisation, the more elaborately figured cloth must have been either embroidery or tapestry. Of course in the later classical times when the mechanical arts had attained a great degree of perfection, some of this elaborate work might have been done in the mechanical loom, but, judging from Ovid's description of the contest between Minerva and Arachne, which at least admits the possibility of weaving quite an elaborate picture (for they at least were not embroidering), tapestry work must have been practised in classical times. But we need not dwell very long upon these times of uncertain evidence and guess-work, since we have in later times such abundance of clear material for carrying out our inquiries. It is at least pretty certain, as I have already said, that all the more elaborate figured hangings actually made in the north of Europe before the end of the fourteenth century were woven in the tapestry loom. A piece of such work, North German, or perhaps Scandinavian, of the beginning of the twelfth century, is preserved at the South Kensington Museum, itself a portion of a larger piece at Lyons. The design of this piece is practically an imitation in tapestry of the mechanically woven patterns of the south-east of Europe, its design being of that kind of contiguous circles enclosing monsters of which I spoke before. It is worth while noting that patterns of exactly the same character have been traditionally used in Iceland till within the last hundred years; only by that time they have got to be done by means of worsted embroidery upon linen. Now of course you understand that these tapestry cloths were done always for special decorative purposes—for wall-hangings and curtains, I mean—their thick, heavy, and rigid texture unfitting them for use as garment-cloth to the same degree that it would fit them for use as hangings. As on the one hand the northern craftsmen—who had to work chiefly in wool, by-the-by, as I have remarked—had not learned the special mystery of the mechanical figure-weaver from the east, so also this kind of wall-hanging would be likely in the cold, damp climate of the north to take the place of the wall-pictures which so commonly decorated the walls of important buildings in the south of Europe. This, in fact, took place, and the use of tapestry hangings grew commoner as pictures grew more elaborate. The earlier pictured tapestry hangings partook of the simplicity of the paintings of the time, as one can clearly see by the one or two precious relics of that period which we have left. These simple pictured cloths were no doubt woven all over the North of Europe, but one of the chief places of manufacture in the thirteenth and fourteenth centuries was Paris. I have mentioned the Edicts of the time of St. Louis, which show that the craft of tapestry-weaving—"tapisserie à la haute lisse," as they call it—was an important craft at that time. Later on in the second half of the fourteenth century the tapestry-weavers are frequently mentioned at Arras—which city, as you know, has given its name to the whole art—Tournai, Valenciennes, Lille, and Douai. Flanders, in fact, was taking the place in tapestry-weaving which it filled to the last. In the last years of the fourteenth century there is much mention made of the craft, and the names of two designers are mentioned—John of Bruges and Nicholas Batailles—who were both in the employment of Charles V. of France. There is, fortunately, a piece of tapestry still in existence of this period, a portion of a great hanging made for the cathedral of Angers. It represents scenes from the Apocalypse, arranged in frames, and divided by figures of the prophets twice the size of life. It is a grand and monumental work, severe in style, and decidedly belonging, especially as to its scheme of decoration, to the fourteenth rather than the fifteenth century, though it was not finished till about 1453. Of about the same period are certain cloths made in Germany, on a small

scale, not above 4 feet high or so. These are quaint and playful in subject and design, and have a domestic sort of look about them; in fact, I think they were made at the houses they were intended to decorate. The subjects are chiefly secular; scenes from romances, sports, and pastimes, the occupations of the month, and so forth. They were probably meant for what were called dorsars, *i.e.*, cloths to hang at the backs of the diners' benches in the hall. The South Kensington Museum has some good specimens of these.

From the middle of the fifteenth century the art of tapestry-weaving went on vigorously, and we have many specimens left us of the time at least of the latter half of the century. It may interest you to hear what the subjects of the tapestries were which Sir John Fastolf left behind him at Caistor in Norfolk. You must remember he was a powerful country gentleman of second rank in his county). One of the finest pieces of tapestry left, by the way, you will find under the minstrels' gallery in the great hall at Hampton Court, somewhat in the dark; it is in good preservation, and the colour is very beautiful; the drawing is both refined and vigorous, much resembling in style the piece preserved at Berne, which is said to have been designed by Roger van der Weyden. Of about the same period (say 1460) is a piece at the South Kensington Museum of the three Fates standing on a prostrate lady. This beautiful piece is a representative of a particularly pleasing kind of decoration, where figures are introduced on a background of conventional flowers, the finest specimen of which, to my knowledge, is in one of the smaller rooms at the Hôtel Cluny at Paris, but unluckily the guardians of that fine museum have nearly hidden it with heavy pieces of furniture. I think we must consider this kind of work as belonging in spirit to the fourteenth century, though it lasted right into the sixteenth.

Well, tapestry went on getting more and more elaborate, and reached its turning-point about the first years of the sixteenth century, of which period the South Kensington Museum has now, I am happy to say, some very noble specimens—equal, in fact, to any of the time. The tapestry of this period, however, though so much more like a picture than that of the earlier period as to be crowded with figures, and to deal freely with all explanatory accessories—houses, chariots, landscape, and so on—nevertheless is carefully designed on the principles proper to the art. The figures are arranged in planes close up to one another, and the cloth is pretty much filled with them, a manner which gives a peculiar richness to the designs of this period, the opposing fault to this being the arrangement of figures and landscape, as in a picture proper, with foreground, middle-distance, and distance, which plan of arrangement in a woven hanging in which the peculiar qualities of a picture must be lacking, gives a poor unfilled-up look, and at a far greater expense of labour and ingenuity than went to the production of the more conventional arrangement.

We have now come to the end of the Gothic period of this noble art of picture-weaving. The middle of the sixteenth century saw the above-mentioned change take place, and thenceforward the faults which accompanied the degradation of all the arts from that time onward had their influence on tapestry, which, however, died hard so to say. Up to the first quarter of the seventeenth century, tapestries were still made, which though they had lost all the romance and direct beauty of the Gothic period, had some claims to be considered decorative objects: the following period saw the execution of works (at an enormous expense) which were a very bad substitute for the yellow wash of a stable. Up to this time the execution at least of these pictured cloths had been pure and reasonable, had not attempted in any way to imitate the execution of the brush; but from the times of the Grand Monarque and the establishment of that hatching nest of stupidity, the Gobelins, all that was changed, and tapestry was now no longer a fine art, but an upholsterer's toy.

We will leave it in that mud of degradation, to have a few words with its congenier carpet-weaving. Now as tapestry was entirely a western art, so is carpet-weaving altogether an Eastern one. 'Tis clearly an art of the prodigies who dwell in tents or tent-like houses; of dusky rooms with no furniture save a few beautiful pots, and a gleaming brass dish or so; of dry countries where mud is a rare treasure reserved for the sides of wells or tanks, and where people kick off their slippers and walk barefoot when they come into a house.

I think it is a doubtful point as to whether carpets proper were made in Europe before the seventeenth century; although some learned men think that the "tapisseries Saracenois" mentioned in the Edicts of Louis IX.'s time were true piled carpet-work, and it must be said that their reasoning seems rather convincing. Anyhow, there is no direct evidence of carpet making in Mediæval Europe, where, as a matter of course, foot-carpets would be little used in the rough and very out-a-door life then led. But from the middle of the fifteenth century there is abundant evidence of the importation of Eastern carpets into Europe, the most direct and satisfactory of which is given us by the pictures of the period, in which such goods are often shown. These show us carpets doubtless made in Asia Minor, of geometrical designs always, the prototypes of which were obviously floor-mosaics; both the Flemish painters and the Italian paint these things with much accuracy and



enjoyment. But besides these carpets there was undoubtedly another kind of design being carried out at the time, whose headquarters was Ispahan, in Persia. This kind of design was elaborate, flowing, and founded on floral forms, very commonly mingled with animals, and sometimes with human figures. In short the geometrically designed carpets above mentioned have a direct analogy with the earlier Byzantine silk stuffs as to design, and this flowing Persian style with the fewer designs which were woven in the looms of Palermo. Of these latter I do not pretend to fix the dates with any accuracy, but among the specimens I have seen, I will undertake to say that there are representatives of at least three different styles before the degradation of the art—the first being a pure flowing style, following closely in detail the forms of the finest Oriental architectural work, *e.g.*, the plaster ornament at Cairo; the next, affecting much the same detail, but blended with animal form; the third, purely floral, flowing and very fantastic, and ingenious in the construction of its patterns. This last, I think, brings us in date to the time of Shah Abbas, the restorer and upholder of the greatness of the Persian monarchy, about the time of our Queen Elizabeth, and his immediate successors—*i.e.*, from 1550 to 1620 or so. After that the degradation began taking a very different form, as always with Eastern art, than it would have done in Europe, where all degradation of art veils itself in the semblance of an intellectual advance. In the East, on the contrary, haste, clumsiness, rudeness, and the destruction of any intellectual qualities are the signs of degradation—a tendency, in fact, to mere disintegration. As to this special degradation of the carpet-making art, the thing to note about it is that it took as its subject-matter all the different styles I have mentioned—the Byzantine or floor-mosaic style, the flowing fourteenth century, the scroll and beast style, and the floral style. From the *disjecta membra* of these four are knocked up, so to say, the traditional designs which are found in comparatively modern Eastern carpets, which, in spite of all degradation, are still generally very beautiful things, not altogether lacking some sense of logical congruity, and generally good in colour.

It would be an endless task to follow all the ramifications of this art in the East; but I must just say that the Mussulman conquerors of India carried it to that peninsula, where it took root and flourished till quite our own days, chiefly using the more floral side of Persian design, but in some places curiously blending with the forms taken from the native art, Buddhist or Brahminical, and in others infected by the eccentric art of modern China. Modern commercialism, since the days when I was a young man, has laid its poisonous touch upon this useful industry, and to-day it is almost ruined as an art, those importers who have any taste having to exercise great pains and patience in getting fair specimens of it for sale at home.

I have now gone briefly through the tale of woven ornament; but, before I say a few words on what may be called the artistic ethics of this art, I must very hurriedly speak to you of the art of dyeing, since upon that is founded all the ornamental character of textile fabrics. In doing so, I will, for convenience sake, use the present tense, but must ask you to translate it into the past, as this art, most of all among the subsidiary ones, has been turned into a trade, even to this extent—that the public is beginning to be conscious of their loss in this respect, though it is quite helpless to remedy it. Also I must ask you to remember that I am speaking as a dyer, and not a scientific person.

Blue, red, yellow, and brown are the necessary colours from which a dyer makes all his shades, however numerous. All these colours are furnished by natural substances, which have, however, to be modified by the dyer's—or, if you will, chemist's—ingenuity. Of blues there is only one real dye—indigo, to wit. This dye in the ancient classical and the European Mediæval countries was obtained from woad, the Germanic name for an indigoferous plant which can be grown in rich soils as far north at least as Lincolnshire, whereas the true indigo can only be grown in tropical or sub-tropical countries. Indigo, as long as it keeps its colour and nature, is insoluble, and therefore unfit for dyeing. It has therefore to be turned into white indigo by means of deoxidisation, which is effected (I must be brief, and not exhaustive here) chiefly by fermentation. The white indigo is then soluble by alkalies. This deoxidation is called by the dyers "setting the blue vat"; and this setting by means of fermentation—the oldest and best way—is a very ticklish job, and the capacity of doing so indicates the past-master in dyeing.

The next colour in importance is red. Two kinds of substances produce it. First, the powdered root of a plant called in the Germanic tongues madder. Of the madder-producing plants there are several kinds, *e.g.*, clovers or goosegrass, *Galium verum* (our Lady's bed-straw), and woodruff. But they are all poor in the dyeing matter, the true madder having to be carefully cultivated in good soil. Second, there are the insect reds—kermes or coccus, the scarlet of the ancients, which lives, or grows rather, on a prickly oak on the Mediterranean shores; the lac insect, chiefly in India; and cochineal, in Mexico and South America. Of these, madder dyes a dullish blood-red; kermes, a central red tending towards scarlet; lac, a coarse, violent scarlet; and cochineal (used variously), crimson and scarlet.

Next comes yellow, which is vegetable again, and again of two

kinds—one bright yellow, from lemon upwards; the other brown yellow. Weld is the representative of the first; the others are extracted from wood, barks chiefly, and are all more or less astringent.

Now these reds and yellows are dyes of a very different quality from indigo. The textile fibres have little or no affinity for them, and have to be impregnated with mineral substances, for which the dyes have an affinity. These are principally alumina and tin. So used, we call these metals mordants. The widest-spread and most ancient mordant is the alum of commerce. The fibres being steeped or boiled in these mordants, the dyeing forms a lake on the surface of the fibre, and the trick is done.

The browns are, first, vegetable astringents; the extract of walnut root or walnut hulls is the representative of that; and secondly, mineral from the solution of iron, the oxide of which, by-the-by, *i.e.*, yellow ochre, can be formed on fibre, and is especially useful in cotton or linen dyeing.

The other colours are made by mixtures of those above: green, *e.g.*, is first dyed in the blue vat, then mordanted and dyed yellow; purple, blue vat again, mordanted, and dyed red; black, blue vat, mordant red, mordant and yellow, or blue vat and brown. The blue vat has to be continually in use for obtaining all kinds of sub-shades. One famous and historical dye has been extinct for hundreds of years, the ancient purple, the use of which seemed to have died in the earliest Middle Ages. It was extracted from certain shell fish, and was a very permanent and beautiful dye, varying in shade from violet to a fine solid and somewhat sombre red purple.

You must be more careful to distinguish this dye from the other famous ancient one than some of the poets have been. This is the Alkernos or coccus above mentioned, which produces with an ordinary aluminous mordant a central red, true vermilion, and with a good dose of acid a scarlet, which is the scarlet of the Middle Ages, and was used till about the year 1656, when a Dutch chemist discovered the secret of getting a scarlet from cochineal by the use of tin, and so produced a cheaper, brighter, and uglier scarlet, much to the satisfaction of the civilised world, which, by the way, has for the last three hundred years always greeted with enthusiasm every invention which would tend to make its clothes and dwellings uglier and more inconvenient.

I regret that I have but a short space to say a very few words about the last textile which I mentioned to you—dye-painted or printed cloth, to wit—and which I could hardly say anything about till I had given the foregoing short account of dyeing, with which art it is so intimately connected. I have mentioned the fact that Pliny makes it clear to us that this art was known to the ancient Egyptians; but it most probably had its origin in India, a country of all others fittest for following the art on account of its peculiar climate and its wealth of dyeing materials. Whether or not the art was practised in Europe in any form is doubtful, but it does appear at least possible that some of the stained clothes, which we have oftenest supposed to be merely pigment painting in distemper, were dye-painted. In the middle of the sixteenth century the art was firmly established in Persia, whose elegant and beautiful pattern-designing from that time forth has made certain forms of ornament quite familiar to us, in the chintzes that were freely imported into England from the end of the seventeenth century onward; for it goes without saying almost that this Persian ornament conquered everything of cotton printing in India, except the cloths which were made for special purposes figured with the personages and scenes of the Brahmin mythology. It is hardly worth while as an artist going into the history of this art in Europe, since whatever was really fine in it was little more than a literal copy of Indian or Persian originals, of which latter one may say that the peculiarities of the manufacture gave opportunities for special freedom of design and very beautiful colour, founded on the two most important dyeing drugs—madder and indigo.

I did not mean from the first to include the pleasing art of embroidery in this discourse on textiles; so here, if you please, we will end our sketch, and will conclude with very lightly considering the artistic ethics of the subject as I promised. Don't be alarmed, it is but a word or two as to the general quality of the design of textiles in good periods. You will find that whatever merits there may be in textile ornament flows always from an instinct for the fit use of material amongst men of simple and manly lives; which instinct is so strong in pure times of art, that its effects are most obvious to us when the designer, who in those days was also the weaver, was thinking least of his materials when he was wrapped up in the invention and beauty of line of the design he was doing. It was in second-rate times of design, such as in that period of splendid Florentine velvet-weaving I have told you of, that the material was as much thought of as the design, or it may be more so—when in fact the design was used for the display of splendour of material.

In the times of the degradation of the art, with the history of which I have not thought it worth while to trouble you, people gradually forgot that the material had anything to do with the design at all; in fact, they often spent time and pains to make, for instance, woven silk look like printed paper, and so on. Moreover, in the fine time of art, what the designer thought of was always in some way to appeal to the imagination; in other words, to



tell some story, however imperfectly. He had not time, therefore, for the petty ingenuities of the later days; he was determined to let us know what he had in his mind, and he, unconsciously may be, well understood that he was to use fair labour and beautiful form in the simplest and most direct way in order to carry out his purpose. So treated, the design of even a scrap of cloth becomes elevated by human intelligence, and has in its humble way distinct intellectual value; it becomes a thing which no intelligent, unprejudiced man has any right to pass by with contempt as a piece of mere frivolity, and I must say point-blank that unless we can elevate our design into this region of fancy and imagination, we were better to have no ornament at all, for to my mind, as a mere commercial necessity, a bit of trade finish, it is unspeakably contemptible. You may easily imagine that I have not time to give you even any hints as to the way of elevating our ornament on wares; nor perhaps would this be quite the best place in which to treat the subject, which it seems to me, if properly treated, would lead us into very serious matters indeed. One hint, however, I should like to give you. I am myself an ornamentalist, a maker of would-be pretty things. Yet I will not try to press on you the fact that there is nothing like leather; rather, I would say, be cautious of over-ornamenting your houses and your lives with cheap, unenduring prettiness. Have as few things as you can, for you may be sure that simplicity is the foundation of all worthy art; be sure that whatever ornament you have is proper and reasonable for the sort of life you want to lead, and don't be led by the nose by fashion into having things you don't want. In looking forward towards any Utopia of the arts, I do not conceive to myself of there being a very great quantity of art of any kind, certainly not of ornament. Apart from the purely intellectual arts, which even must not swallow up too much of life, I can under our present conditions, looking forward from out of the farrago of rubbish with which we are now surrounded, chiefly see possible negative virtues in the externals of our household goods; can see them never shabby, pretentious, or ungenerous—natural and reasonable always; beautiful also, but more because they are natural and reasonable than because we have set about to make them beautiful. We needn't think that this will be an easy matter to bring about, but when it is brought about I do believe some sort of genuine art and ornament will accompany it—it may be in rather a Spartan way at first. From that time onward we shall have art enough, and shall have become so decent and reasonable that every household will have become a quiet daily unadvertised health exhibition.

## REPORT ON WESTMINSTER HALL.

By J. L. PEARSON, R.A.

(Continued from page 34.)

ON the foundations of Henry III.'s work I have shown a two-storeyed building projecting westward, of the same height as the cloister, but with a high-pitched roof and gable towards St. Margaret's Church. This I have designed to be in character with Richard II.'s work, considering the data insufficient to warrant any attempted restoration of the original work of Henry III. I may mention, incidentally, that a building with a high-pitched roof existed here formerly in this position.

The lower floor of this is arranged to form a stand for horses, to supply the purpose of the shed at present existing in the same position. The upper floor might be one large chamber similar to the old Exchequer Court, and there will be ingress to it by a flight of steps from the hall, and also an approach from New Palace Yard by an octagonal turret at the north-west angle, which will occupy a position not far from one built by Elizabeth. The uses of this chamber will depend upon those to which the gallery over the cloister is put. As for these uses, the gallery can, if desired, be divided into rooms by partitions, there being access by a continuous passage, lighted from the roof. These rooms can be approached by the stairs both at the north and south ends of the hall.

I have shown the completion of Sir Charles Barry's work on the north side of St. Stephen's Porch in such a manner as I believe he himself would have desired to have seen it completed under present circumstances.

Regarding the uses to which the open cloister below could be put, I have shown how it would be possible to carry out the suggestion which has been made to me to utilise it as a stand or shelter for carriages. This arrangement has, however, its disadvantages. There is easy space for two carriages to pass in the cloister, but there is a turn at the south door and an incline to reach New Palace Yard, involving a reduction of the open space on the west side of the hall. But with a suitable alteration of the levels of New Palace Yard in front of the hall, whereby the north elevation would be much improved, I anticipate no difficulty in arranging for the ingress of carriages to this cloister at the north entrance. I have shown how this cloister, if left open, can be protected by an iron grate from the dangers to which public buildings are at present exposed. I have further shown as an

alternative treatment how the arches could be filled with tracery and glazed, so that an additional series of rooms opening from the hall could be obtained similar to those on the upper floor. So far as the elevation is concerned, I consider this the second-best treatment, but considerably inferior to the first. The third suggested alternative consists in the erection of a cloister wall to form a building of but one storey. I can conceive no advantages from this treatment; there is no gain in accommodation, and the elevation is much impaired. To carry it out would be to discard the distinct evidences which remain of two storeys having formerly existed.

I have been able to obtain the exact position of the weatherings of the great buttresses from a comparison of the existing work with a figured drawing by Pugin. Their form is substantially the same as that of the one on the east side, which Sir Charles Barry, with apparently no reason, pulled down. Old drawings agree in showing the hall wall battlemented, and I have, therefore, unhesitatingly adopted this treatment. The dormers in the roof being modern and interfering much with the external and internal effect, I propose to remove.

The earliest record of towers at the north end is in a plan in the Crace Collection at the British Museum, by Norden, date 1593, but there is no sufficient suggestion of their form to gather any clue as to what that originally was, and late drawings show them substantially as at present, but without battlements. In Hollar's print, on the other hand, 1647 battlements are shown. The alteration of these towers, therefore, cannot be based upon any reference to history or past record. But it is almost demanded by the extreme ungainliness of the existing front. This ungainliness is to a large extent due to the contiguity of Sir Charles Barry's buildings, the roof of which overtops the eastern tower, and has to be stopped in a most unfinished manner. It is said that Sir Charles Barry fully recognised this, and proposed in consequence to raise the entire hall floor and roof about 10 feet, and thus give it proper importance. No part of the existing stonework which cases the front is earlier than 1820. The battlements are modern, and the large niches in front are conjectural restorations of what existed before. It is certainly hard to believe also that the present windows are copied from anything of Richard II.'s time. The whole front in fact has an air of spuriousness. I propose, therefore, to alter the windows and raise the towers one stage, which, to preserve a domestic character, will include two floors, and I have endeavoured to re-design this so as to harmonise Sir Charles Barry's elaborate architecture with the severer work of the hall. By thus remodelling them, I hope to render them worthy of their position and importance in the group in which they now play so insignificant and discordant a part.

My approximate estimates for the above works are as follows:—

Cost of the new cloister and its extension westward, including the restoration of the buttresses and the west side of the hall. This will embrace the removal of the already worn and dilapidated casing of the upper part added by Smirke, and the replacing of it by masonry well bonded into the Norman cove, and to accord with the character of Richard II.'s work, 21,500*l*.

Cost of the work on the north side of St. Stephen's Porch, being the completion of Sir Charles Barry's work, 5,000*l*.

Cost of the alteration to, and the raising of the two towers at the north end of the hall, including some work to the gable end, 8,800*l*.

## MUNICIPAL BUILDINGS, PAISLEY.

A MEETING has been held in Paisley for the purpose of memorialising the Town Council to reconsider their decision as to the erection of municipal buildings at the Cross, and to press upon them the advisability, on the ground of economy, of again negotiating with the county authorities with the view of yet acquiring the whole of the County Buildings, and keeping the site at present proposed to be built on as an open space. Resolutions were adopted in favour of the memorial, and it was stated that inasmuch as the County Buildings could be bought for 10,000*l*., it was not economy to expend 30,000*l* or 40,000*l*. for offices to accommodate the town clerk, the chamberlain, and the gas and water officials. A deputation afterwards waited on the Town Council to express the opinion of the inhabitants. The Provost said that he was sorry that a difficulty had arisen at the eleventh hour. The plans were all prepared, and as to give these up now would be a serious responsibility, he might fairly ask them why they had not come to state their objections sooner. He then explained the history of the undertaking, stating that the site and building would cost not more than 40,000*l*., to meet which the Council had 19,000*l*., leaving 21,000*l*. to be provided for. They expected that by rents of shops, offices, and other sources of income, they would be able to pay the interest on borrowed money, and also annually to lay past something to the redemption fund. He then compared the scheme with that proposed by the deputation, and endeavoured to show that the Council scheme was more feasible and cheaper. In conclusion he stated that the Council would give the matter their earnest consideration.



## NOTES AND COMMENTS.

THE Corporation of London have passed a resolution which indicates a new departure in sanitary affairs. It is proposed that in all instances where houses are being erected the Commissioners of Sewers shall place themselves in communication with the building or other owner, and treat with him or them for the construction of a proper ventilating-shaft in the chimney-breasts or party or other walls, for the purpose of ventilating the sewers, carrying the ventilating-shafts well above all adjoining roofs. What is meant by "treat" has, however, not been defined. We suppose that in a great many instances the building-owners would be disposed to meet the views of the Commissioners without any expectation of payment; but there may be cases in which the right to insert a ventilator will have to be paid for. But is it safe in all cases to have shafts from the sewers running up walls?

CAPTAIN GALTON suggests the following novel remedy for defective sanitation, nothing less, in fact, than absence from dinners and parties in a house which has not been certified as perfect:—"If people refused to attend dinners or parties where the rooms are filled with bad air, the architect, the builder, and the occupier would soon find means that in every room the air should be pure and of a comfortable temperature." It is not suggested, however, how "people" are to be satisfied on this point. Is it proposed that an invitation should be accompanied by a certificate from one of the self-appointed authorities on sanitary science guaranteeing that the dining-room and drawing-room are to be kept free from an excess of carbonic acid, and that the air has been washed and dried before its entrance?

THERE are enough English schools in connection with the Education Department to furnish accommodation for no less than 4,670,443 scholars. The loans which the Public Works Commissioners have been empowered to advance on the security of the rates amount to 13,421,513*l*. The Department has, in addition, sanctioned loans amounting to 2,614,888*l*. from the Metropolitan Board of Works and in the open market. Up to Michaelmas 1883 the loans advanced to School Boards were as follows:—The School Board for London, 5,201,409*l*.; School Boards in boroughs in England, 4,171,805*l*.; School Boards in parishes in England, 4,434,685*l*.; School Boards in boroughs in Wales, 194,654*l*.; in parishes, 622,642*l*.

THE Bishop of TRURO has issued an appeal for funds towards building the cathedral at Truro. The choir and part of the transept are finished. Even if the idea of building the nave is abandoned, the committee earnestly desire to complete the transept. Unless, however, 11,000*l*. are provided or guaranteed by August 8, they will be unable to accomplish this object, and will be obliged, instead, to spend a large sum on a temporary erection. The Bishop says that unless the wealthier classes give liberal donations, it will be impossible to complete the building in this generation.

THE National Fête in Paris is always made the occasion of conferring honours on French artists, and in spite of the depressing circumstances attending the fête on the 14th inst., the rule was observed. M. CABANEL has been promoted to the rank of commander in the Legion of Honour, M. ROBERT-FLEURY and M. BENJAMIN CONSTANT are now officers of the Order. The new chevaliers are:—MM. RAPIN, WEERTS, CLAUDE, COLLIN, painters; M. THOBARD, sculptor; M. BOITTE, architect; M. DUMAS, Director of the Art School at Lyons; and M. JOLY DE MONTESSON, of the Administration of Civil Buildings and National Palaces.

THE Scottish ratepayer will no doubt be glad to hear that the Committee of Council on Education have arrived at the conclusion that shortly there will be enough schools in Scotland. The official calculation is that, after making due allowance for sickness and other excuses, there should be school-seats provided for one-sixth of the population, or 635,929 school-places. At present the actual supply falls somewhat short of this number, as the accommodation at the close of the year (allowing 8 square feet of area for each child) was 633,701 places, and in several counties the seats are not equal in

number to one-sixth of the population. This occurs either where that extent of accommodation is not called for, the inhabitants of the upper classes being in excess of the normal one-seventh, or where, as in one or two large towns, the wants of the population have not yet been fully met by the efforts of the School Boards. But when the outstanding building grants have been paid, and several schools now in the course of being erected without such aid are occupied, the authorities estimate that the school supply of Scotland will be virtually complete.

ALTHOUGH England has at present so strong an interest in Egypt, little is done for archæological research. M. MASPERO wants money to continue his exploration of the pyramids of Lisht, which can only be undertaken during those days in July and August when the Nile is at its lowest. All that could be obtained for him in this country was 92*l*., but in a short time 1,000*l*. was subscribed in Paris. This is only one instance of the support given in France to archæology. The French Government in 1881 founded an Egyptian School of Archæology at a cost of 62,000 frs. Each year since they have subscribed 50,000 frs. to its support. They bought MARIETTE'S papers for 79,000 frs., and published his last two works at a cost of 72,000 frs. Yet there would be some excuse if the French were not liberal in aiding modern investigations, for enormous sums have been spent on Egyptian archæology from the time of NAPOLEON'S invasion.

THE Master Plumbers in Brooklyn are aggrieved by the indifference of the wholesale dealers to the identity of interests which should subsist between them and the plumbers. The plumber, it is said, stands toward the manufacturer and dealer in plumbing material in the same light as the retail dealer in any other line of business, and should have his proper measure of protection in the matter of discounts and other trade usages. It does not follow that because the architect and builder may offer facilities for a certain amount of trade, independent, in a certain sense, of the plumber, that the latter is to be ignored. The manufacturer must still bear in mind that he is, to a greater or less extent, dependent upon the plumber for such an indorsement of his goods as will secure for them a preference over other goods of a similar character—an indorsement which should carry considerable weight on whichever side it is given. The facilities for an adverse decision are many. The practice in vogue at the present day among property-owners in America is to place the plumbing regulations of new and old buildings in the hands of some plumber of good judgment and ability. There is nothing easier, under such an arrangement, than to practise the law of retaliation upon the manufacturer who ignores the relations which should exist between him and the craft, or in other words, to employ goods manufactured by houses which deal liberally with the trade. The masters maintain that it is only human nature to retaliate in this manner, and if the manufacturer so treated remains stubborn, it cannot be denied that, while such a condition of affairs continues, the plumber is, in a certain sense, justified in pursuing the proposed course. The manifesto suggests that if people wish to have careful plumbing in their houses it is more than ever necessary to secure proper supervision.

THE report of M. FERDINAND DE LESSEPS on the present condition of the works at the Panama Canal will enable the shareholders to realise the greatness of the undertaking. The number of men employed has been increased every month, and in May 1884 there were over 19,000 men. It is calculated that the excavations amount to 110,000,000 cubic mètres, in addition to 10,000,000 cubic mètres of earthworks in altering the course of the Chagres. Up to the end of April 1884, the total amount of work done is represented by 5,243,302 cubic mètres of earth removed. Until January 1, 1884, however, the real work of cutting the Canal had scarcely fairly begun, and of the total of 5,243,302 cubic mètres of earth removed, nearly half, that is to say, 2,482,768 cubic mètres, have been removed in the first four months of the present year. In the total of 120,000,000 cubic mètres of ground to be excavated, 40,000,000 will be taken away by means of dredging machines. The projector says there can be no doubt of the Canal being open for navigation before the close of 1888.









Proposed Shops & Offices on Leicester

DESIGNED BY ALEX<sup>R</sup> BLEAKLEY, A.R.I.B.A.

1884-85 22 Martin Lane London E.C.









“Claremont,” Bournemouth; belonging to D. M. Fox Esq.; M. I. C. E.

J. Nixon Horsfield, Architect,  
Surbiton Hill, S. W.





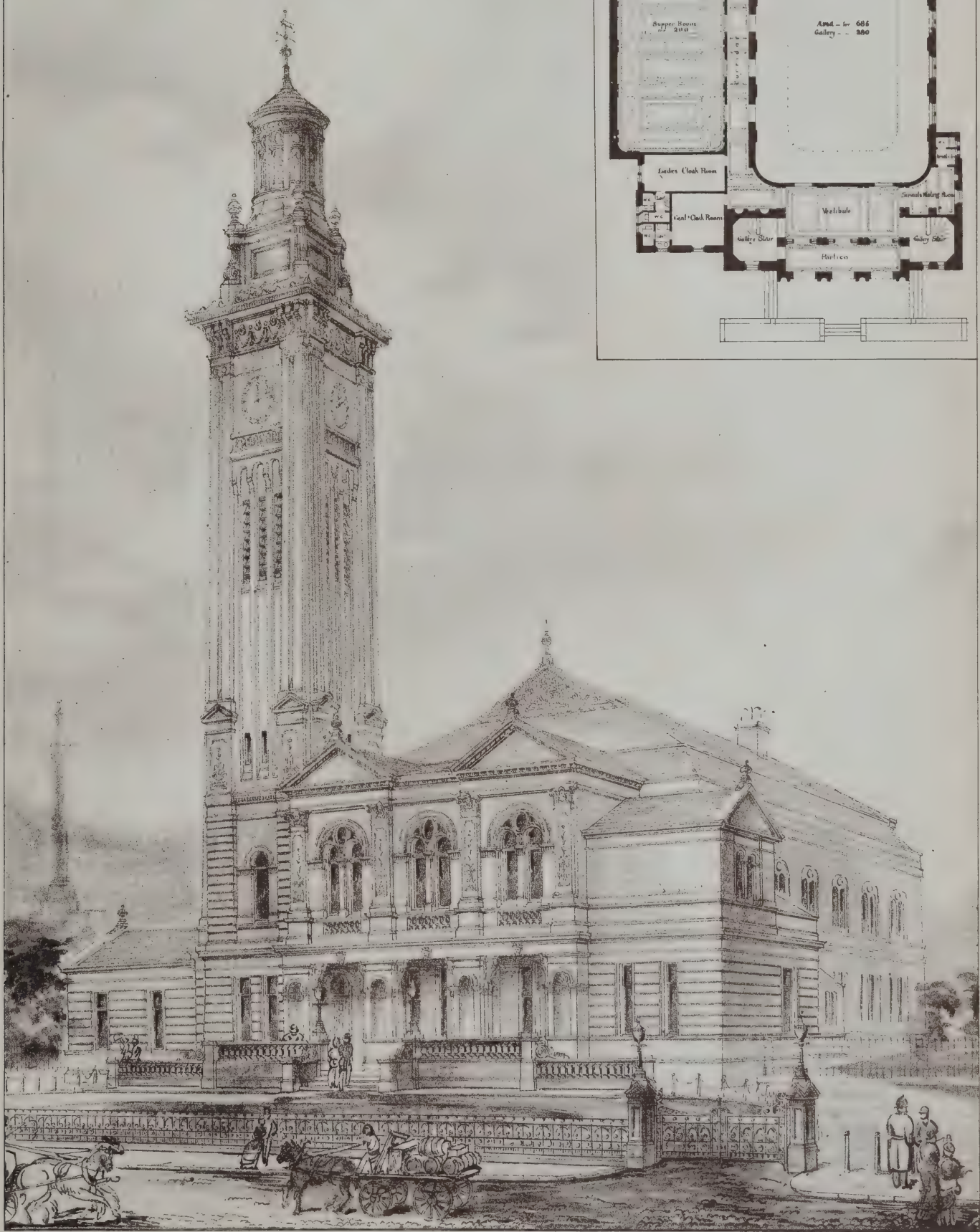




A Small Country House

A SMALL COUNTRY HOUSE.  
WALTER MILLARD, ARCHITECT





"INK-PHOTO," SPRAGUE & CO., LONDON

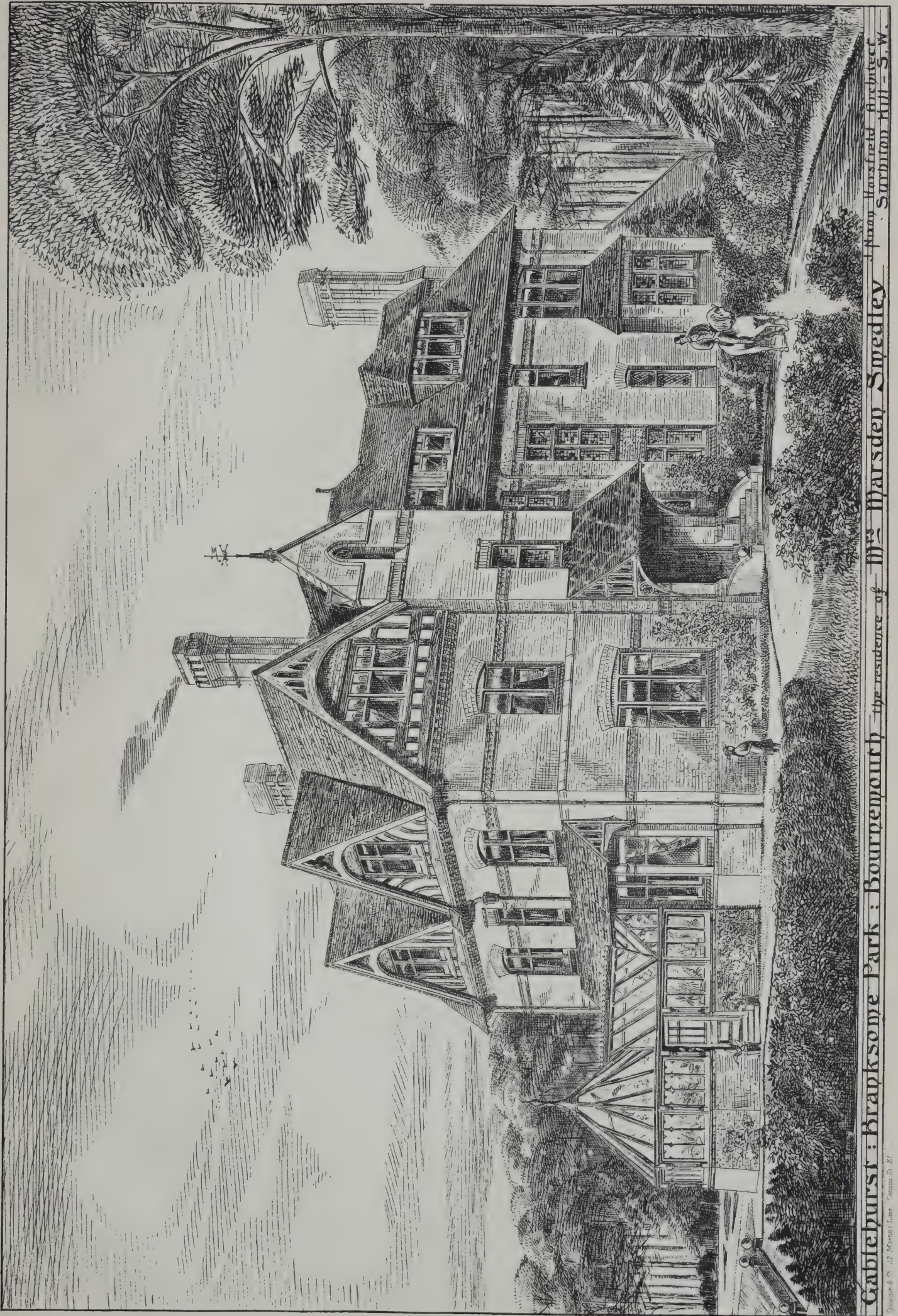
DESIGN FOR THE ELGIN TOWN HALL.

BY MESSRS KNOX & HUTTON, ARCHITECTS.







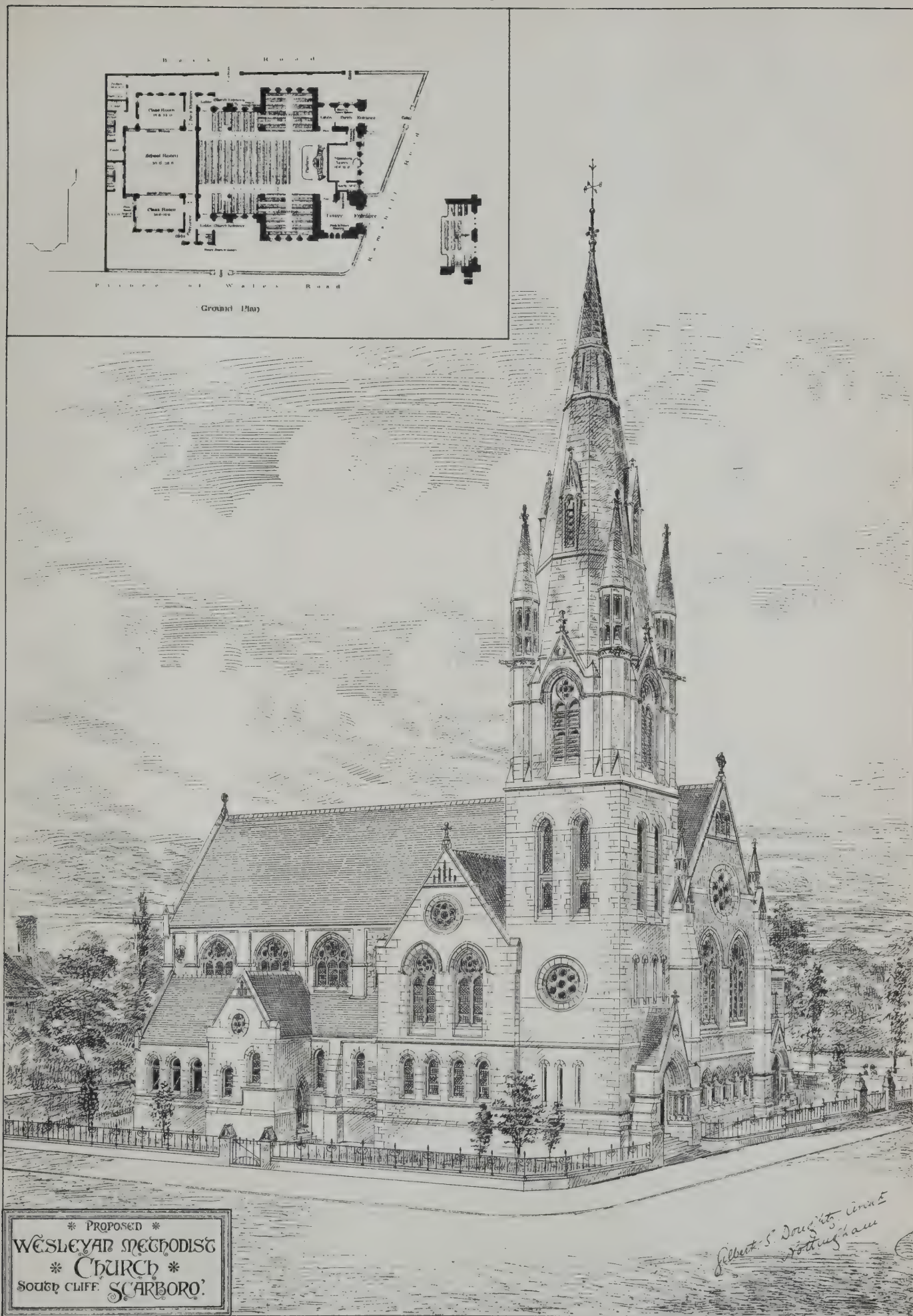


Gablehurst : Brapksome Park : Bournepouth the residence of Mrs Marsden Smedley J. Marsden Smedley Architect  
Surrey Hill - S.W.















## ILLUSTRATIONS.

DESIGN FOR THE ELGIN TOWN HALL.

THE subject of this illustration is a competitive design submitted by Messrs. KNOX & HUTTON, of Edinburgh. As will be seen from plan, the hall is approached from portico leading into spacious vestibule, having two doors leading immediately to area of hall, and ticket-taker's stall between. A handsome corridor is placed on the left, which answers the purpose of access to reserved seats, also access to platform. The platform and accompaniments are so arranged as to be suitable either for musical or dramatic representations, there being scene-docks, retiring-rooms, mezzanine, organ and organ-gallery. The supper-room is approached from side corridor, and has at upper end an alcove containing service-table, behind which is service-room and scullery, with kitchen over. The doors inside of area of hall and supper-room could be rolled back, thus throwing open the entire area for assemblies. Cloak-rooms, &c., for ladies and gentlemen are provided at near end of corridor, with servants' waiting-room immediately opposite.

The approach to galleries would be by stairs on either side of vestibule, and having at landings suitable lavatory accommodation. The gallery would be continued along either side of hall, but so narrow as to be easily carried without the use of pillars; there would in addition be a large back gallery extending over vestibule and portico. Owing to the site being large, the authors have shown the hall well back off the public thoroughfare, thus giving facility for arriving and departing vehicles with the least interruption to foot-passengers. The style adopted is Italian, freely treated, and the cost, without tower, was estimated at about 7,000*l*.

A SMALL COUNTRY HOUSE.

THIS house was designed for a site commanding a particular view, which accounts to some extent for the large amount of balcony accommodation provided on the front, as well as for other arrangements of plan. The materials proposed are red bricks for the wall-facing, red tiles for the upright tile-hanging, and brown for the roofs, the gables being finished in cream-coloured rough-cast and the woodwork of bays and balconies painted white.

Our illustration is taken from a coloured sketch by the architect, Mr. WALTER MILLARD, of 19 Great George Street, Westminster.

CLAREMONT AND GABLEHURST, BOURNEMOUTH.

THESE houses, lately completed, are situate about a mile from Bournemouth West, in the Branksome Park, amidst a forest of pine trees. From the attic windows are obtained views of the surrounding country and the sea. The tower was so arranged to obtain the splendid views across the Purbeck Hills and the Poole Harbour.

Plans have been approved for the billiard-room and conservatory to Claremont, but have not yet been carried out. The houses are built of local stocks, with red facings, and the roof covered with Brosely tiles. Internally the halls, staircases, and mantels have been specially designed to suit the various positions, and the work has been substantially carried out by Mr. FAGGETTER, the foreman of the works, without the intervention of a contractor, from plans and under the superintendence of Mr. J. NIXON HORSFIELD, architect, Surbiton Hill, S.W.

DESIGN FOR WESLEYAN METHODIST CHURCH, SOUTH CLIFF, SCARBOROUGH.

THE design we publish this week is by Mr. GILBERT S. DOUGHTY, of Nottingham. The plan is cruciform, with nave, transepts, and aisles. A choir-gallery for thirty members is placed over vestry, and school and class-rooms in the rear. It was proposed to carry out the erection in sections, firstly erecting the nave and transepts as the church, with the school-rooms complete. Additional accommodation, which was to be shown, would be provided by placing galleries over schools and in transepts, which when completed would accommodate 700 persons. The spire was intended to be added when funds should permit. The exterior was to be of stone; the facing with "Bradford setts," built in the manner of "sneck" walling, and a Yorkshire dressed stone for quoins; the bands to be of rock-faced blue Handsworth stone. The interior to be

finished in red brick and terra-cotta, with stone dressings. The cost of the first portion to be erected was estimated at 3,500*l*.

DESIGN FOR SHOPS, ETC., AT LEICESTER.

THIS design was submitted in a late competition, and was prepared by Mr. ALEXANDER BLEAKLEY, A.R.I.B.A., of Birkenhead and London.

## ARCHITECTS' CONFERENCE AT THE HEALTH EXHIBITION.

THE proceedings of the Conference held under the auspices of the Royal Institute of British Architects, were resumed in the Conference Hall, at the Health Exhibition, on Friday the 11th inst., Mr. George Godwin in the chair, when a paper was read by Mr. E. C. Robins, F.S.A., on "The Impermeable Construction of Roofs, Walls, and Basement Floors, with a Reference to Ventilation and Warming incidental thereto." Mr. J. D. Seddon followed with a paper on "The Construction of Chimneys." After the reading of the papers Mr. C. Forster Hayward, F.S.A., opened a discussion on the subjects treated of, and observed that the importance of having such parts of dwelling-houses as floors, roofs, and walls constructed so that they might not be open to the influence of atmospheric changes, might seem at first sight self-evident to everyone. But this point, enforced in the paper just read, having special regard to ventilation, was nevertheless one well worthy of discussion, connected as it was necessarily with the second paper, which referred more particularly to another detail of construction, so essential in this country and climate not only to comfort but to the possibilities of ventilation, viz., chimneys. The point of discussion was therefore the effect of permeable or impermeable, porous or impervious, walls, floors, and roofs—first, as impermeable to air, bad or good, including heat and cold; second, to water, *i.e.*, damp and rain. If we would ventilate at all scientifically, in any but the most elementary manner, we must have walls and floors impermeable to atmospheric effects. If sudden changes of heat and cold could to any great extent affect the interior of a building to be ventilated, all special arrangements would be upset, and the introduction of wet and damp through the walls would greatly militate against any artificial means employed to ventilate. Impermeable floors in the basement were best secured by asphalte in some form, either as a layer on concrete with smooth surface, or as a bed for wood block or other such flooring. Floors of a similar or inferior nature might be used, such as cement, &c. Impermeable floors above the basement were obtained by the use of rolled iron joists and concrete, with asphalte or cement covering, or perhaps with a wood surface as before. But this touched on the question of fireproof construction. He would refer to a modification of these impervious floors, such as wood joists fitted in with concrete and pugging, and then a surface of cement or tiles, which he had often used for school passages, where fire-resisting material was sufficient as opposed to fireproof construction. They must give up all contrivances for ventilation through these floors, and omit all calculation as to air getting through them into the room through the floor often charged with dust of carpets, &c.; also all need for air-brick ventilation for the floor itself to keep away dry rot, &c. But the floors would be all the more suitable for laying on air-pipes bedded in the substance of the floor, this being more rigid than the ordinary wood joist floor construction.

Walls were obviously imperfect if built of porous material, whether of brick or stone, or with imperfect joints, or without damp-courses, either vertical or horizontal, either in basement or chimneys, where necessary. Hollow walls were well known as expedients which required careful work and some experience to make effective. Even all the galvanised iron ties twisted and bent upwards, and the patent brick bond, were not enough unless care were taken to prevent lodgment of lumps of mortar, &c., during construction; so that in building hollow walls a space for raking out these below was best left to the last. Then the jambs of windows were difficult to manage, and other points required attention. It was certain that these two walls half-brick thick were better than a 9-inch solid wall to resist the wet, and that an outer stone construction should generally have a lining of brick a slight distance from the mere stone face to secure a wall impermeable to wet. But the best of all as against wet, though not always as against wind and draught, was a vertical external covering of tiles or slate. The former obtained in such districts as Surrey, and the latter in Cornwall and elsewhere.

Roofs might be made impervious as floors, and when so made would obviously be flat or horizontal, not sloping. For ventilation purposes this was not an unmixed advantage; but for access to chimnies, and many purposes, a flat roof was in many ways desirable. The use of substances such as hygienic rock-cement in place of mortar for joints, or as a coating internally of hollow walls, to prevent access of damp and weather was to be commended; but of the substances advertised for coating walls exter-



nally, little advantage might be expected, and less for those often mentioned as being certain specifics against damp, &c., internally.

As to ventilation and warming, we must, in thinking how best to utilise our impermeable constructions, remember that we had to feed the human lungs first, and secondly the fire. When warming was not required only human lungs had to be thought of, but the chimney might be of great use, or at any rate, if it existed, could not be ignored in any system of ventilation. Ingress of air was best secured by such tubes as were well understood as "Tobin's"—a convenient though inaccurate name for them—because they could be regulated in height and size, and by small valves and doors also they could be placed regularly around a room away from an outer wall, being supplied from the other side by tubes laid in the floor. The same arrangement of tubes laid in the floor could be adopted to feed the fire, either in the hearth, or at the cheeks at the side jambs. And of course the air could be brought in the same way to the back of the stove or grate if so prepared to receive it, and there be warmed and distributed. Additional access of air could often be obtained—indeed, sometimes only so—by spaces over the doorheads fitted in with louvres, or by special ventilators made for doors cutting into the mid-rail, and avoiding at least the necessity for opening the doors, and preventing cold draughts to the feet. The one of these systems he had applied to schoolrooms, &c., opening on to a corridor, the other to workrooms of milliners and others. For egress of vitiated air the chimney came into use with talc valve and other ventilators, but specially built flues were best lined with circular or square flue piping, but with regulating valves, which were so seldom used. Either accidental or artificial heat, such as gas burning in the tubes, should be used to keep up the essential draught. If it were congenial to our notions of comfort, those Continental tile stoves with tall flues going right through the rooms to the roof would afford, or might be made to afford, effective egress for vitiated air, being conducted by heat either into some adjoining flue or other ejector. The sum and substance of it all seemed to be a strong recommendation to the householder to procure, and so of course be willing to pay, what was necessary to provide good impermeable walls, floors, and roofs, if he would have a preliminary to good ventilation, or even warmth and comfort without draught.

Mr. RALPH NEVILL, F.S.A., remarked that no mention had been made of wall-papers. Wall-papers, together with plaster, were important as materials which retained warmth and kept out the air. Mr. Robins would find no little difficulty in forcing air through such a wall. [Mr. Robins had shown an experiment by which a lighted candle had been blown out by air blown mechanically through stone and brickwork.] But it must be remembered that the force employed was altogether an exaggerated force—quite a tempest. In allusion to the use of felt for roofing purposes, Mr. Nevill said he had known cases where it had had to be stripped off on account of its unpleasant smell. Mr. Seddon said that a 9-inch by 9-inch chimney was better than a larger size. His own experience was the contrary, though he believed Mr. Seddon's plan would answer if a current of air was introduced below the fire. There was, however, a danger that such inlet would get stopped up. People often did stop up air inlets—Tobin's tubes or whatever else. Cold air descended the sides of a chimney, while the smoke and heated air ascended in the middle; and, consequently, in a 9-by-9 flue there was not sufficient space for the descending and ascending currents.

Mr. W. WHITE, F.S.A., said he thought it was not a question of the size of the flue so much as whether the flue were properly constructed. In speaking of rendering them impermeable, he alluded to the slovenly way bricklayers often did their work. He also spoke of instances of mildew and dry rot arising from the use of felt in roofs.

Mr. SCHMIDT, speaking from his experience at Eastbourne, said he found rooms were kept well ventilated by the introduction of Tobin's tubes in boxes at each corner of the room, and an opening centrally as egress.

Mr. ROWE, of Sydney, said that at the other side of the world, 15,000 miles away, they were troubled by the same difficulties as here, and moreover, they had a greater difficulty about Sydney in obtaining materials that would resist the weather. The discussion, he believed, concerned rather the dwellings of the poorer classes than large buildings, and in his part of the world the climate was not a dry one; bricks alone would not keep out the weather; the common stock bricks were utterly useless, so they employed a good deal of cement in constructing ordinary villas in Sydney and its suburbs. Even that was not always successful, on account of inferior workmanship and its being put on too sparingly. If properly done, and if the amount was mixed in proper proportions, it was found to be weatherproof. Glazed bricks were not used to any great extent on account of their cost. He had tested their sandstone against brickwork as to resistance to wet and moisture, and in every case the result was in favour of the sandstone rather than bricks. Sydney itself was built on sandstone. It was a magnificent building stone. The chief architectural buildings were erected in it, and as it aged a little it acquired a fine tone, and the surface became exceedingly hard and impervious to wet. As to chimnies, in large hospitals he had found it necessary to make them 2 feet, and even 2 feet 6 inches, square.

Colonel PRENDERGAST referred to Dr. H. Acland's remarks on the previous day as to the public believing there was, some 35 years ago, a conspiracy on the part of physicians in Oxford, when they talked of ventilating-pipes for water-closets, &c. But there was a poison just as dangerous as sewer-gas, and more subtle—a poison we knew very little about—and that was vitiated air. Yet the public thought slightly of ventilating their rooms. He said rooms advisedly, for he was convinced that the proper way to treat a house was to ventilate each apartment by itself, and not to attempt to ventilate the house as a whole.

After some remarks from Mr. Waterhouse, and Mr. Bradshaw, of Bolton, the discussion terminated.

Mr. Ewan Christian having taken the chair, Mr. Horace Jones read a paper entitled, "A Suggestion with Regard to the Construction of Doors so as to afford Opportunity of Escape from Fire;" and another on "An Economical Mode of Fireproof Construction, adopted in several instances in Public and Private Buildings," after which a short discussion took place.

Mr. DAWSON, in the course of his remarks, said that the staircase, if constructed with care and skill, might generally be made a secure way of escape in the event of fire.

Mr. H. H. BRIGDEN adverted to the importance of having a proper floor surface, which would not easily take fire from accidental sparks from the fireplace, or the overturning of a lamp. Fireproof floor construction was costly, and the ordinary floor was not fireproof at all. He recommended something between these two, such as blocks of wood or concrete bolted together, which produced an inflammable surface. What seemed to meet the requirements of the case better than other exhibits was the ligno-concrete of Messrs. Clark, Bunnett & Co.

Mr. EWAN CHRISTIAN closed the discussion, and said that by constructing a wall with a hollow cavity, you got the same effect as if you had a wall one hundred years old. Roof construction had received less attention than any other part of a building. People did not know the value of the cavity system. People spoke of the insufficiency of warmth in large buildings such as churches, but the fact was that the fault did not lay in the warming apparatus, but rather in the roof, because people did not attend to making roofs as impervious to air as walls. With a roof properly constructed an attic could be made as comfortable as a drawing-room.

## THE AMSTERDAM EXCHANGE COMPETITION.

A STATEMENT has been published containing details of the competition for the proposed Exchange at Amsterdam. The building is to cost from 125,000*l.* to 166,666*l.* sterling. The competition is open to foreigners as well as Dutchmen. The designs are to be sent into the Burgomaster and Aldermen of Amsterdam within four months, but as the date of the conditions appears to be May 7, 1884, the time would expire in September. A plan showing the situation of the building is to be on a scale of  $\frac{1}{500}$ , and there are to be two ground plans, four façades, a longitudinal section, and three cross sections on a scale of  $\frac{1}{200}$ . The drawings are to be sent in under motto, accompanied by a note written in Dutch, French, English, or German. There is no need of an estimate, as the designs will be judged exclusively on the basis of their more or less appropriate and judicious distribution and artistic character.

The jury will be international, and is to consist of the following eleven members:—Vienna, Professor F. von Schmidt, architect; Berlin, Professor J. C. Raschdorff, architect; Paris, P. Sedille, secretary to the Society of French Architects; Brussels, J. J. van Ysendyck, architect; London, Professor R. Kerr, architect; Amsterdam, L. H. Ebersson, architect to the King of the Netherlands, P. J. H. Cuypers, architect, J. R. de Kruyff, director of the Government School of Industrial Art. Commercial Members—Amsterdam, D. Cordes, president of the Chamber of Commerce; A. L. Wurfbaïn, president of the Stockbrokers' Society; T. Hepner, member of the Corn Exchange Committee.

The members of the jury are to give an undertaking that they have not competed, and are without any share in one of the plans. They are to select ten plans, the authors of which are to be entitled to premiums of 1,000 *fls.* Out of the ten five plans are to be afterwards selected, and the authors are to be invited to take part in a second competition. For two weeks, at least, all the plans are to be publicly exhibited.

The programme for the second competition is to be drawn up by the jury, and approved by the town council. The premiums are to be as follows:—10,000 *fls.*, 6,000 *fls.*, 5,000 *fls.*, 4,000 *fls.*, and 3,000 *fls.*, according to the merits of the plans. In consideration of the premiums the authors are to cede to the municipality their plans and subsidiary data. If the plan which gains first premium is found fit for execution, the author—unless there are cogent reasons to the contrary—is to be charged with the execution of the work, the fees being fixed by the council on the advice of the jury. In that case the premium will be deducted. If the works are entrusted to some other architect the author of the first plan is to receive remuneration in money. Before the final decision of the Town Council the plans of the select competitors are to be publicly exhibited for at least two



weeks, and the report of the jury will be published at the same time.

The Exchange is to contain the following rooms, viz., an exchange hall, rooms for various purposes connected with the corn trade, a room where official quotations of the Stock Exchange are to be made up, an additional post-office, a telegraph-office, a telephone-office, a reading-room, rooms for the use of trade in securities, a room for the directors of the Stockbrokers' Society, a refreshment-room, rooms for the Chamber of Commerce, a hall for public meetings of the Chamber of Commerce, a room for the Exchange Commissioners, a room for the Corn-trade Commissioners, room for doorkeepers, attendants, &c., and, if space allows, rooms for offices, public sales, &c.

### THE CRYSTAL PALACE EXHIBITION.

THE following is an alphabetical list of the awards to English artists which have been made in the art section of the International Exhibition at the Crystal Palace:—

*Oil Paintings.*—A. H. Burr, gold medal; Delance, bronze medal; J. C. Dollman, bronze medal; Alfred East, silver medal; J. Forbes-Robertson, silver medal; W. H. Gadsby, silver medal; H. Hardy, silver medal; James Hallyar, silver medal; Ring Haynes, silver medal; W. C. Horsley, bronze medal; Keeley Hallswelle, silver medal; Edwin Hayes, R.H.A., silver medal; Middleton Jameson, bronze medal; Louise Jopling, bronze medal; E. R. King, bronze medal; Gunning King, bronze medal; Yeend King, bronze medal; C. T. Lander, bronze medal; F. W. Lawson, bronze medal; William Linnell, silver medal; Sir Frederick Leighton, diploma of honour; Stewart Lloyd, silver medal; John Morgan, bronze medal; Clara Montalba, bronze medal; J. Watson Nicol, bronze medal; Arthur Stocks, silver medal; W. D. Sadler, bronze medal; W. Sikert, bronze medal; A. Carlton Smith, bronze medal; Topham, silver medal; W. Cave Thomas, silver medal; A. H. Tourrier, bronze medal; Van Prinsep, A.R.A., silver medal; Ernest Waterlow, silver medal; W. Weekes, bronze medal; R. C. Woodville, gold medal; Pollock Maurice, silver medal.

*Water-colour Drawings.*—Wyke Bayliss, silver medal; John Bromley, bronze medal; J. C. Dollman, bronze medal; Thos. M. Henry, silver medal; Clinton Lin, silver medal; Mortimer L. Menpes, gold medal for collection; Du Maurier, silver medal; Paul J. Naffel, silver medal; Thomas Pyne, silver medal.

*Etchings.*—Fine Art Society (Limited), diploma of recognition; S. Cousins, R.A., diploma of honour; Messrs. Cassell & Co., diploma of recognition; *Graphic* collections, diploma of recognition; Nelson Horatio King, silver medal for photographs.

*Screens, Needlework, Tapestry.*—Royal School of Art Needlework, diploma of honour; Mrs. F. Rowan, silver medal; Miss Shoesmith, bronze medal.

*Sculpture.*—C. B. Birch, A.R.A., gold medal; Aristide Fontana, bronze medal; E. Onslow Ford, bronze medal; J. A. A. Gerritsen, silver medal; E. Ed. Geflowski, silver medal; H. Thornicroft, A.R.A., *hors concours*; George Tinworth, silver medal.

### SOCIAL SCIENCE ASSOCIATION.

THE annual business meeting of members was held at the offices of the Association in Adam Street on Tuesday last. A report from the Council, detailing the action taken by the Association during the twelve months ending June, was presented and ordered to be received and circulated. The report dealt with several subjects of interest in regard to which special action had been taken, and among these may be mentioned the Fine Art Copyright Bill promoted by a committee of the Association; the conveyance of land by the system popularly known as one for the registration of titles as opposed to a registration of deeds; instruction in workshops, the International Health Exhibition, &c.

The following appointments in the Association for the ensuing year, 1884-85, were then made:—President, the Right Hon. G. J. Shaw-Lefevre, M.P.; Presidents of Departments—I. Jurisprudence, Mr. John Westlake, Q.C., LL.D.; II. Education, Mr. Oscar Browning, M.A.; III. Health, Dr. Norman Chevers, C.I.E., F.R.C.S., Eng.; Art, the Right Hon. A. J. B. Beresford-Hope, M.P.; Chairman of the Repression of Crime Section, Mr. J. S. Dugdale, Q.C., Recorder of Birmingham. Sir Richard Temple was appointed President of the Council. Mr. Westlake, Q.C., LL.D., and Mr. Joseph Brown, Q.C., were reappointed as Foreign Secretary and Treasurer; and Mr. Andrew Dunn and Mr. Andrew Edgar, LL.D., were re-elected auditors. The following were appointed hon. secretaries of departments:—I. Jurisprudence, Mr. H. N. Mozley, M.A.; Mr. Meryon White, M.A.; Mr. Herbert A. Safford. II. Education, Mr. Rowland Hamilton. III. Health, Mr. H. H. Collins and Dr. Edward Seaton. IV. Economy and Trade, Rev. S. A. Steinthal and Mr. Edward J. Watherston. V. Art, Mr. Philip H. Rathbone and Mr. Arthur H. Mackmurdo, A.R.I.B.A.

The proceedings terminated with the election of the various standing committees of departments, and hearty votes of thanks to the officers for their services during the past year.

It was reported that the arrangements for the annual Congress, which is to be held at Birmingham from September 17 to 24, were in a very forward state.

### HYDE PARK CORNER.

CONSIDERABLE progress having now been made in the works in connection with the removal of the colossal statue of the Duke of Wellington from Hyde Park Corner to Aldershot, the committee appointed by the Prince of Wales with the sanction of the Queen and of the Government, to consider the best means of decorating the open place near Hyde Park Corner, are now in a position to invite subscriptions with the following objects:—

1. The laying out of the place architecturally with suitable decorations, including candelabra.

2. The completion of the triumphal arch in the manner originally contemplated by the architect, the late Mr. Decimus Burton, with bas-reliefs round the pediment, and by the erection thereon of a quadriga in bronze, carrying a figure of Victory. As is already known, it is proposed to submit this important work to a limited competition.

3. The provision of a suitable pedestal for the existing colossal statue, together with its erection on a suitable site, to be selected by the military authorities at Aldershot.

The Government have entrusted Mr. Boehm, R.A., with the execution of a new statue of the Duke of Wellington, and Parliament has voted the necessary money for this purpose. It is felt, however, that the other objects which the committee have in view are not such as should be defrayed out of Imperial funds. It is estimated that these works will together cost about 50,000*l.* (of which it is approximately calculated that the completion of the arch and the quadriga will cost 30,000*l.*), and this is the sum which it is now desired to raise.

It is believed that this completion of the works at Hyde Park Corner will make a worthy approach to the West End of the capital, and suitably commemorate the fame of the great Duke of Wellington in the immediate vicinity of the house which was given to him by the nation.

Subscriptions for the "Hyde Park Corner Improvement Fund" will be received by Messrs. Drummond, Charing Cross, or by the hon. treasurer, Major-General Dillon, C.B., C.S.I., care of Messrs. Drummond.

It will be optional for subscribers to designate which of the above specified three objects they wish their subscriptions to be devoted to. Failing any such expressed wish, the money will go to the general fund.

### IMPERMEABLE CONSTRUCTION IN REFERENCE TO VENTILATION AND WARMING.\*

By E. C. ROBINS, F.S.A.

THE enclosing walls of every house are an important factor in considering its sanitary condition; so also is the roof covering, which, together with the walls, constitute its power of resistance to the winds and weather of our inclement climate. Until late years, however, the site covered by the walls and roof of any building, has been thought to be sufficiently protected by them, and the existence of such a thing as "ground air" has been ignored in constructing the lowest ground or basement floors of buildings.

Having myself witnessed Dr. Renk's experiments at the Hygienic Institute at Munich, which he has been for years carrying on under the supervision of Dr. Pettenkofer, I am able to speak from ocular demonstration concerning the penetrability by air and water of the materials commonly used in the construction of buildings both public and private.

There are circumstances under which it may be desirable that the air should find its way through walls: for example, wherever no other means are provided for the change of the air in dwellings. Indeed, were it not for the flimsy construction of the houses of the poor, and the passage of the air through the outer walls, and through the crevices about door and window openings and basement floors, the air of the rooms would become perfectly stagnant, and be much more unhealthy than it is. But in the construction of the houses of the future upon sound sanitary principles, it is of course presupposed that nothing comes by chance, that the providence of the designer anticipates and provides for every contingency, and thus puts under the control of the occupier the means of warming, ventilating, and maintaining in healthful condition the house he inhabits. To attain this end, it is obvious that in the first place it must be possible to insure that the basement floor shall be impervious to ground air and moisture.

\* A paper read at the Conference of Architects at the International Health Exhibition.



But what is ground air? It is the superincumbent pressure of the external atmosphere which passes through the earth subjected to its pressure to find its escape in the direction of the least resistance, which direction is commonly that forming the site of a house. The resistance to this external pressure is much reduced by the temperature of the air within the house, which is usually much higher, and consequently much lighter; so that there is every inducement from natural causes for a stream of ground air to be continually passing through the basement, or lowest floor from without, unless steps are taken to construct an impervious flooring, the resistance to the passage of the air through which shall be greater than the pressure.

When the earth is clean and the house is pure there may be no great harm in allowing this process to go on, but for one consideration, viz., the humidity of the air so passing during wet seasons. But in populous places, where the earth is fouled by innumerable accumulations of refuse of all kinds, and where defective drainage has rendered pestiferous the very soil upon which the house stands, and leaky gas-pipes have rendered the external soil black and reeking with gaseous deposits, &c., I say under these circumstances it becomes a matter of enormous moment that the house itself shall not be made the safety-valve for the reception and accumulation of all these abominable impurities in the form of imperceptible "ground air."

#### *Impermeable Basement Floors.*

There are two ways of overcoming this evil. The one is by forming an impervious flooring as before mentioned, and the other is by constructing channels under the floor leading to the kitchen chimney flue. These channels should be of porous materials, and should be six feet apart; and by being carried to the kitchen chimney, the ground air will be drawn off with the heated air and smoke of the chimney, and tend to increase the draught in the flue at one and the same time. This was accidentally discovered by Dr. Renk during his experiments at Munich; for, being unable to account for the difference of ground air pressure in different parts of the basement upon which he was operating, he excavated the floor, and found that one of the air flues from the chemical laboratory passed under the basement floor to the foul air extract shaft, drawing with it the ground air in its immediate vicinity, thus relieving the pressure upon a certain area, and giving the confirmatory exception to the rule he was formulating.

The ordinary materials for paving basement floors are all of a very porous character, and where boarded floors are provided no attempt used to be made to cover the soil at all, till the last amendment of the Act governing these matters required a thin layer of lime concrete to be laid over the earth under the floors generally.

The experiments made on various materials show that hydraulic cement is almost impermeable, and a layer of cement concrete covered with pure cement, or an asphalt surface, or concrete formed of Portland cement mixed with granite or slag chippings, and finished with a smooth surface, will answer the purpose desired. But for the sake of comfort and warmth to the feet, it is often desirable that wood should be the covering. This is equally well secured by the adoption of one or other of the many excellent wood block floorings exhibited in this great International Health Exhibition, to be laid on 6 inches of cement concrete. The blocks need not be more than 2 inches thick, and should not be less than 1½ inch thick and 6 inches long by 3 wide. They should be dovetail grooved at the bottom, burntised before using, and bedded in cement. Powdered cement should be brushed into the interstices after the laying is complete, and the surface well washed with pure water and left clean.

Deal, pine, pitch pine, oak, walnut, teak—most kinds of wood will do, which may be planed or polished, and laid in any variety of pattern, equivalent in beauty to a parquet floor. Where there are no basements it would be better that all the rooms should be thus paved, the difference in the purpose of the rooms being expressed by the character of the design and the quality of the material used. Vitreous porcelain tiles are best for passages, being both impermeable and not slippery on the surface. But excellent tiles of every kind are now available for the purpose, and are most easily kept clean.

#### *Impermeable Wall Construction.*

In the second place, let us consider briefly the case of the enclosing walls of a building. Nothing but the observation of carefully conducted experiments will enable you fully to realise the remarkable porousness of the ordinary building materials used for the external walls of dwelling-houses.

The impermeable qualities of terra-cotta give it a foremost place in the decorative construction desirable in all buildings. Mr. Waterhouse has proved its value as a material for use in the metropolis. The Natural History Museum has the exceptional advantage of being, as it were, cased in terra-cotta. In the erection of buildings of the ordinary porous materials, however, precautions may be taken to achieve a similar result. There are a variety of systems for forming hollow walls, the inner and outer casing being connected with strips of bent iron galvanised. But hollow walls are not always efficient, and are rarely perfectly

well done, and, of course, leave a space into which bad air can accumulate, and vermin may some day find their way and be unable to get out and die, and thus fumigate the building. The system is costly too, and covers a larger area than solid walls.

There is another system which makes a wall at once air and waterproof so far as it extends, leaving nothing but the crevices in the ill-fitting of the joiners' work of doors and windows, which only good workmanship can eliminate. It consists of an asphalt bond between the inner and outer casing, applied in the following manner. Let us suppose a 14½-inch wall, on one side 9 inches of brickwork, on the other 4½ inches, with 1-inch division between, the opposite joints being left free of mortar for about three-quarters of an inch each. At every two or three courses the heated asphalt is poured in, and the crevices all filled up with this impervious material, and the result is a wall much stronger than the ordinary wall, occupying no more space, and perfectly wind and weather-proof. Impermeable water tanks may thus be constructed, an example of which may be seen in the Parkes Museum.

In facing with stonework, this will be found a valuable accessory, but the preservation of the face of the stone will not be secured, and another and a wider question is opened up as to the best kind of preserving solution for treating stone and other porous facing materials, and preserving it from the action of the weather and disintegrating gases afloat in the atmosphere, and found to be so destructive in London, and the manufacturing towns of the provinces. But before discussing this question, let us return to the impervious walling, to observe that there is still a weak point not rendered impregnable to damp air.

#### *Damp Courses.*

The asphalt must not only be applied vertically but also horizontally at the foot of the wall and at the level of the lowest floor adjoining. In fact, the asphalt may be continued at the level of the underside of the wood block basement flooring and so seal up the walls and floor.

This horizontal course in walls is called a damp course, and is usually applied, but when it is absent the result is that damp rises in the walls forced up by the pressure of the ground air by the variations of temperature, by capillary attraction, &c., and the plaster becomes demoralised and falls off the walls, and considerable discomfort and expense is the consequence.

#### *Preserving Solutions.*

This was the subject of an interesting discussion at the Institute many years ago, under the presidency of the late Sir Wm. Tite, and in the transactions of the Institute the whole matter was very carefully reported. I invariably specify that the stonework shall receive when in a dry state, two coats of a solution, the effect of which is to render the surface of the stone comparatively impermeable, at all events, till such a time as the stone has had time to weather and form its own skin and natural protector from, the weather. In fact, wax and gum are dissolved in a spirit, and the solution is applied with a brush on dry stonework: the spirit volatilises, and the congealing of the rest forms a skin as thick as the stone is impregnated; two coats are usually sufficient.

At Hanover Church, Regent Street, may be seen three different processes, none of which have as yet shown signs of failure. The building had become perfectly black, but very few signs of decay had taken place except in the towers, and I was desirous of removing the soot without taking away the weathered surface of the stone, and this I achieved by the use of the wet steam jet. I also discovered that the portions which had been treated with linseed oil when first erected fifty years ago had not decayed to any extent, while the rest was so far gone, that the greater part of the stones had to be replaced.

Of course a great deal of the defective stone we see arises from injudicious selection; there is good and bad stone of every kind, and unless pains are taken not only to select the quarry itself, but to mark the approved stones at the quarry, and then to see that they lie in the building on the same bed that they lay in the quarry, disappointment must ensue whatever the solution you employ; solutions should only be used to preserve good stone, not to make bad stones pass muster.\*

#### *The Roof.*

A very few words must suffice to dispose of this subject, having regard to our limitations as to time. It is not my intention to speak of flat roofs of fireproof construction, and covered with impermeable materials of various kinds; obviously they are rarely required, and, when wanted, only need to be well executed to answer the purpose intended. But the ordinary house-roof is a thing that forms a hat to a building; it may or may not have projecting eaves, or a brim to the hat, but it is always presumed to rise above the greater part of the topmost rooms, and to form an air space protective of the inmates from the extremes of heat and cold. That this is but a presumption is, in many cases, only too true, and the cruelty of putting servants in slate, or even metal-

\* I have had models made of an ordinary brick-wall, and one with asphalt core, both of which I have fitted with caps to show the passage of the air through one and its exclusion in the other.



covered attics, within a few inches of the outer air, is often forgotten alike by the builder who sells, and the master who buys his family residence.

The ordinary speculative house-builder gets the thinnest slates, often absorbent of moisture and permeable by the sun and wind, and he fixes these with common nails to sappy battens, secured to light rafters at the least available gauge, instead of making every third slate lap the first at least three inches, and be fastened with two copper nails to each slate to inch rough boarding, through which the snow may be further prevented from finding its way by putting an intermediate layer of inodorous felt, and thus keep back the heat and the cold and the rain and the snow, and form a sound external covering to the house.

Zinc does not last above a dozen years in the English climate, as a rule; but if used, it should be put on with laps, and without soldered seams or anything to hinder its free expansion or contraction, and should be put in much thicker than is customary—not less say No. 15 gauge.

Lead forms the best and most durable roof covering, properly laid, of sufficient thickness—say 5 lbs. weight for the square foot for ridges and flashings, 7 lbs. for gutters and flats. But nothing is more effective than tiles, and nothing, when well done, warmer in winter or cooler in summer. The Broseley tiles are admirable in colour and hardness.

Projecting eaves are a great protection to the walls; and the projections on the face of the walls for cornices, labels, strings, should all be well under-cut, not only because of the good effect of a sharp shadow, but because the water is thus prevented from running down the face of a building and disfiguring it, and making it damp.

#### Ventilation.

It is not my purpose to enter very deeply into the question of ventilating and warming, but it is obviously necessary to make suitable provision for ventilation not only for the purposes of human respiration, but for the sustenance of the healthful condition of the materials used in the construction of a house. Dry rot, and other forms of premature decay, being induced by the want of a free circulation of air about the places where it appears, the best proof of which is that by the introduction of the air the growth of the fungus is arrested. As I have already remarked, the exclusion of the air from the enclosing roofs, walls, and basement floors of dwellings renders it necessary to provide ventilation of a simple kind, and I shall conclude my paper with a few remarks upon the subject.

If we have something to learn from foreigners of the scientific application of the principles of warming and ventilating great public buildings, as I have elsewhere shown, foreigners have much to learn from us of the domestic comfort derivable from the homely fireside of the English people. That it is wasteful of fuel is true; polluting to the atmosphere cannot be denied. Nevertheless, it is the best system of warming and ventilating ordinary living rooms. But few rooms have any corresponding inlets, and so to supply the omission, whizzing draughts come in through the keyhole and crevices of the doors and windows and floors, and even through the walls themselves. When there is no fire the aspiration by the chimney-flue is much diminished, but might be maintained throughout the summer by the use of a ring of gas-jets just over the mouth of the register. There are circumstances, however, under which this system is inapplicable, and the guidance of a professional man is desirable in all cases.

### THE CONSTRUCTION OF CHIMNEYS.\*

By JOHN P. SEDDON.

CHIMNEYS, at present at any rate, are integral and important features of ordinary buildings in England. It may be that they can and will ultimately be altogether dispensed with, and our towns made, by the progress of economic science, to resemble those in the East—mere collections of flat-roofed boxes; and these may possibly be fed with fresh air of varied temperature, and drained of their fouled air by some parish pump and common heating apparatus. When this scientific millennium arrives such dwellings may be left to purely scientific men, to whom æsthetic considerations are questions of superfluity.

I have, however, now to speak as an architect, addressing a sanitary conference, upon chimneys as existent, and I wish to show how they can and should be treated, that they may be practically useful and ornamental as well. They have been both in former times; witness the graceful chimney-shafts of Grosmont Castle, Southwell Priory, Hampton Court, and a host of Elizabethan mansions, the acknowledged picturesqueness of which is mainly due to the treatment of their chimney-stacks. Alas! however, they are seldom either useful or ornamental nowadays, as a glance at the skylines of our streets will reveal, since they are almost invariably disfigured by ugly cowl and "tallboys." These are but records of domestic misery and discomfort, every one repre-

sented a martyrdom, endured until it became intolerable; and their aggregate cost amounts to a tax upon the inhabitants of our cities which, were it an enforced one, might lead to a revolution. Yet the makers of such monstrosities occupy no inconsiderable space in this very Health Exhibition, and recommend their wares as palliatives for a disease which they assume to be not only universal but inevitable. I maintain that it is not the latter, and need not be the former, and that such costly and ugly excrescences may be altogether dispensed with if but a little attention be given to the proper construction of these portions of our buildings—chimneys and fireplaces.

Now, let me ask, Why do our chimneys smoke? Firstly, because, as a rule, air is not laid on or provided to houses as water is; but rather, indeed, it is in general sedulously excluded. The more sanitariously impervious (that is to say, air-tight) we make our dwellings, the more necessary it is to provide for the admission of fresh air to their interiors, and, unless this be done, smoke cannot ascend the flues of their chimneys; secondly, chimneys smoke because the fireplaces are ill-constructed, and gathered over from the openings of the fireplaces to the flues in such a gradual manner as to leave large vacant spaces above the grates, which act as reservoirs for stagnant cold air, by contact with which the smoke is chilled and prevented from rising and being drawn at once into the flues; thirdly, chimneys smoke because flues are ordinarily made too large (the usual size is 14 inches by 9 inches); they should rarely be made more than 9 inches by 9 inches; fourthly, because no provision is made in the flues for such draughts of air as may invade them to expend and exhaust themselves before they reach the fireplace; and fifthly, because the tops of the chimney-shafts are not carefully constructed with guards against wind in a proper and slightly—that is to say, an architectural manner. Usually all such provision is left to be supplemented by some miserable metal makeshifts, by the chimney-quacks whose fantastic creations Dickens satirised so keenly, and yet, as it would appear even from this exhibition, quite vainly.

As it is useless to expect that chimneys can properly perform their office, of conducting readily into the outer atmosphere the smoke from fireplaces, unless their construction is proper throughout, I shall treat of the fireplace, flue, and chimney-top as a whole, of which the several parts are inseparably connected; and I shall begin at the bottom with the fireplace, as the most important of the three, and the one most commonly in fault in the case of smoking chimneys, although it is generally the last to be noticed or examined with a view to its correction. The grate itself, however, I shall leave for later consideration, though it is by no means of the least importance.

The first thing to be done is to provide a good and sufficient supply of fresh air to the fireplace from the outside of the building. To insure its being good it is well, when possible, to bring this from as high a level as can be arranged, yet not from the top of the chimney-stack, lest smoke from other flues be drawn down thence with the fresh air. It may be drawn from the lower part of the stack, just above the roof, by special air flues brought down the chimney jambs. This, however, is not always possible, and then it must be brought in through the walls or by pipes through the floors. An advantage of bringing the fresh air to the fireplace, rather than to any other part of an apartment, is that even if cold, it does not produce the inconvenient draughts usually complained of. It spreads thence upwards and gradually, before being finally drawn up the chimney by the fire in the fireplace; whereas, if admitted elsewhere, its passage is direct to the fire, and unpleasantly so to those who may intercept its course. When no provision for air is made, it has to force its way in at windows and doors, with the same result, made all the worse because of the low temperature at which it enters. The air, however, brought to this point, may be tempered or warmed by being made to pass around the grate before it is admitted to the apartment, and an essential for both comfort and health is that it should be so tempered; every grate, stove, or heating apparatus should, in fact, be thus made the fountain or source whence fresh air is admitted to apartments.

The next point to be considered is that of the outlet of the smoke from the fireplace to the flue. The flue should be here contracted at once to its normal size, or rather made a little smaller, immediately above the fireplace, in order to promote a quick draught of the smoke into it. The usual construction of this part of chimneys, already adverted to, does not conduce to this end. The opening of the fireplace is gathered gradually, in an arched form, to the flue, leaving an objectionable space for cold air. Now, arch and chimney-bar may be economically dispensed with by forming a mantle block in Portland cement concrete *in situ*, extending the full width of the wall, and 9 inches longer than the opening, and 9 or 12 inches deep, pierced with the smoke flue in the centre, and one for warmed air on either side. These may be circular, and about 8 inches in diameter, and thus, being slightly smaller than the flue over, will insure a quick draught to the smoke flue. The side holes are intended as outlets for the fresh air that has passed round the grates, and thus can be conducted by flues built above the mantle block to gratings for admitting it into the apartment, either in connection with the chimney-piece, or just below the ceiling.

The construction of the smoke flue from above the central hole

\* A paper read at the Conference of Architects at the International Health Exhibition.



in this mantle block is the next point deserving and requiring consideration. As has been said, this is ordinarily made 14 inches by 9 inches, but this is too large, and as such becomes a frequent cause for smoking chimneys. Flues should not generally be made more than 9 inches by 9 inches in brickwork, and are better if lined with fireclay pipes within such, which reduces them to about 8 inches in clear circular diameter. The interior surfaces of the pipes should not be smooth, or else much inconvenience will be caused by frequent small falls of soot, from its being unable to cling to the pipes at all.

Midway between the top of the mantle block and the ceiling line of the apartment, the smoke-flue should have a portion expanded and formed in such a manner as to break the direct line of ascent of the smoke. This is in order to allow down draughts or gusts of air that have invaded the flues from the top to expend themselves, without checking the smoke as it rises from the fireplace. A flat ledge should be provided in this expanded part of the flue, immediately under the smoke-flue above, that air driven down may impinge upon it, and be diverted, and a sideways rotary motion given to it, directing it upwards again, together with the smoke rising from below. Specially formed pipes can be introduced into flues lined with fireclay pipes for this purpose, and more than one of these may be inserted in the course of the flues with advantage.

We now have arrived at the chimney-stack above the roofs, and the principal object in its construction is to maintain throughout its warmth, as it is there of course exposed to cold and damp; and it is well known and observed that those chimneys which are in external walls are, from this cause, far more liable than others to smoke. Pervious brickwork becomes saturated by rain, and the flues consequently reduced in temperature are unable to maintain the requisite upward draught. It is well, therefore, for this reason as well as for additional strength, that the chimney-stacks above the roof should be built in cement instead of common mortar, and of impervious bricks or stone and lined with fireclay pipes.

The tops of the chimney-stacks need careful arrangement, because the exit of the smoke from them is very liable to be disturbed and hindered by gusts of wind, particularly when beneath other high objects in the neighbourhood. There should, therefore, be at the top of every flue an expanded space, within which most down draughts of air will rotate and expend their force without invading the flue below; and there should be louvred openings so arranged as to direct the wind upwards, and so make it to assist, instead of interfering with or retarding, the exit of smoke. This is the object generally and often rightly attempted by the supplementary cowls, at any rate by the best of them, but it may and should be rather executed in proper architectural form, and durable and slightly materials, such as stone, brickwork or terra-cotta, instead of metal. Terra-cotta is perhaps specially suitable, as being very easily manipulated into the somewhat complicated forms required for the purpose.

So much, then, for the construction of these three parts of a chimney—the fireplace, the flue, and the chimney terminal of the stack. Unless all are well and properly executed, no special appliances for particular parts can be of much avail. I have endeavoured to point out the general principles that I think should be attended to in connection with them, and believing that the health and comfort of the community is at present very injuriously affected by their general neglect, I earnestly commend them to the consideration of this Conference.

There is, however, one more part connected with the chimney which is perhaps quite as important as any of the rest with which I have dealt, but what I have to say about it is somewhat more tentative and experimental. This is the grate within the fireplace. Volumes have been written about it, and yet it remains open for discussion and inviting improvement. My contributions to its literature will be short, and yet it will embody the result of much time and thought expended upon it.

Burning coal principally, as we do in England, we have to seek in the consumption of its smoke, or at least of as large a proportion of it as possible, within the grate itself, the solution of the main difficulties we are considering. For the smoke being consumed, smoky chimneys will be cured. The office of the flue will then be to convey away the gaseous products of combustion only, and not soot. This is, I believe, attainable by means of diverting the current of the smoke, after it has issued from the top of the fire, in such a manner as to force it to pass through the body of the fire before it ultimately is allowed to escape up the chimney flue. Perfect combustion is, I think, more to be sought than what is called "slow combustion," and it is a mistake in my opinion to smother a fire in its own ashes, by preventing their dripping through a grating into an ashpit. The cheerful aspect of an English open fire is not likely to be driven out of fashion by even Health Exhibitions; nor if it could be, and the attempt were made, do I think that the public salubrity would be improved by the substitution of any description of close stoves in apartments, notwithstanding the preference they have obtained on the Continent, and to a great extent in America. Nor do I believe that any of the systems that have been proposed for keeping up throughout dwellings an equable temperature, are likely long to curtail the liberty of English subjects to make their several rooms of whatever degree of heat it may please their oc-

cupants. I should certainly therefore not advise the most ardent believer in such a system to expend capital in building houses otherwise than as at present, or to try to dispense with chimneys, the construction of which I have been dealing with.

But there are many grates shown in this exhibition which presume fresh air to be brought to them, and in which means are provided for warming and distributing such air into apartments, and I cannot too highly commend the system, and advise its universal adoption by the public; and I may point out that this can and should be done, more often than it is, in the case of the kitchen chimney, which is almost always in use, and that the air warmed thereby, not being wanted in the kitchen, should be conducted to the general hall of the house, which supplies air to the rooms whenever their doors are opened, though of course there should be means of shutting it off in summer, when it might prove rather a nuisance than otherwise.

Trusting then that soon, if it be not already achieved by any of the grates shown in this exhibition, that most desirable end, the consumption of smoke within the grate itself will be successfully carried out, I conclude these few observations upon the construction of chimneys, waiting discussion thereon from the members of this Conference.

## SUGGESTIONS RESPECTING DOORS AND FIRE-RESISTING CONSTRUCTION.\*

BY HORACE JONES.

A CONSIDERATION of many of the unhappy occurrences during the terrible catastrophe of fire within my own memory has induced me to formulate "A Suggestion with regard to the Construction of Doors so as to afford opportunity of Escape from Fire." I append a list of the more prominent cases in which, by the newspaper accounts, some five thousand lives are alleged to have been lost. Supposing this is somewhat exaggerated, and there is only one-half or even a fifth of that amount, it will still be a horrible and terrible tale to record against the builders and designers of public buildings.

Amongst those to which my attention has been more especially drawn, I may quote the following, viz. :—

1807. October 15. Sadler's Wells Theatre.—Eighteen persons trampled to death from a false alarm of fire.

1845. May 27. Raggett's Hotel, Dover Street, Piccadilly.—Several eminent persons perished.

Exact date unknown, but about thirty years ago, a whole family were burnt or suffocated through not being able to open the front or street door during a fire, not far from the Marble Arch.

1858. December 27. Coburg (now Victoria) Theatre.—Alarm of fire. Sixteen persons killed.

1863. December 8. Santiago (Church of the Campana), capital of Chili, South America.—About 7 P.M. The feast of the Immaculate Conception of the Virgin Mary, and the last day of a series of religious celebrations, in the month of May. The church, when brilliantly illuminated in a dangerous manner, was burnt down, the fire beginning among the combustible ornaments, and above 2,000 persons, principally women, perished, the means of egress being utterly insufficient.

1866. November 5. In Hampstead Road.—Thirteen lives lost.

1878. February 4.—Circus at Calais Fair.—The loss of life was mainly owing to the supplemental door, for escape in case of accidents, *opening inwards*, becoming blocked. Twelve dead and others not expected to recover.

1878. October 11. Colosseum Music Hall, Paradise Street, Liverpool.—Thirty-seven persons dead and several seriously injured. No relief until the police cut away a partition forming a barrier, which divided the stream of people entering towards the different parts of the auditorium.

1881. December 8. Ring Theatre, Vienna, formerly Opéra Comique.—Total destruction of building and loss of life variously estimated at from 500 to 900 persons.

1883. January 10. New Hall House, chief hotel of Milwaukee.—Fire. Ninety lives lost.

1883. January 13. Fire at Berditzcheff, a town of Russian Poland, in the Government of Kieff, in a circus.—The building in a few minutes was a mass of flame, and 1,500 persons perished.

1883. June 14. Victoria Hall, Sunderland.—Death of 183 children. Probably caused by a bolt slipping into a socket in the floor.

I have had copies of the newspaper accounts made, which give in more detail the fearful occurrences. I have alluded especially to the one at Santiago. It would, however, occupy too much time for me to read them through just now, though anyone can do so, as they are on the table for inspection.

Such, then, are the reasons which prompted my "suggestion"—a suggestion applicable to the large doors of churches, theatres, concert-rooms, or other public buildings; also the street or entrance doors of mansions, hotels, boarding-houses, or any other place

\* A paper read at the Conference of Architects at the International Health Exhibition.



where numerous inhabitants are likely to be in occupation; also to the subsidiary doorways of public buildings, which are only to be in use either for egress under special circumstances such as panic or accident or for ordinary egress. The models, let me observe, will show far better my ideas than any description in words, but I may as well describe while you inspect them.

I will first take the wainscot, one which may be assumed to be about one-fourth or one-fifth the full size, or say about 4 feet 6 inches wide, and nearly 8 feet high. It represents an ordinary door to a large house, or a fair-sized hotel, and nothing is indicated on the outside excepting a six-panel door opening inwards, as doors of this description generally do; an alarm of fire occurs, the people on the inside having rushed down to this, their principal mode of exit, and, in their panic and desire to get out, block the door, either with their own bodies or pieces of furniture which they are in hopes of saving (something of this kind no doubt occurred in the large house at the Marble Arch, already alluded to); but if the unfortunate victims crowding and blocking the door with frenzied fear but not unnatural panic, found suddenly that this blocked door, opening inwards upon them, had a means of safety in itself, by simply opening outwards the folding wicket framed within the door, their chances of escape from almost certain destruction would be very much enhanced, and their thankfulness can be better imagined than described. Of course, if the height of the door admitted it, the upper panels would be framed solid, the wicket opening and shutting to and from the transom only.

The painted and grained model shows a somewhat similar door, only instead of a folding wicket it has only a single door, and would be peculiarly applicable to such cases as that headed the "Circus at Calais Fair," where, according to my information, the deaths occurred through a subsidiary door opening inwards becoming blocked by the people from the circus in their panic-struck efforts to seek egress.

I would here observe that the cost of the extra labour in forming doors with these wickets, as shown by the model, would not be very large, a very small percentage upon the cost of an ordinary door being sufficient; the principal expenditure of course would be in the additional hinges and fastening, although the latter could be of any kind, from an "Espagnolette" bolt down to barrel bolts or bars. They would of course open only from the inside, and either by sealing or other methods insure detection where they had been unnecessarily tampered with. I have no doubt, in fastenings, &c., &c., some of the ingenious minds whom I have now the honour of addressing would readily find, if they think this is a suggestion worthy of attention, some improvement. I would also admit that wickets are often applied to large doors or gates; these wickets are, however, very small, very inconvenient, and generally open the same way as the gates.

I will now proceed to call your attention to a form of construction, or rather an application of the different qualities of two of the best known and most universally used materials.

Some years ago I had occasion to visit an engineer's workshop or factory, that had been then quite recently destroyed by fire—indeed, the ruins were still smoking—and these shops consisted principally of two or three rather lofty storeys. A curious circumstance immediately presented itself: the beams or girders were composed generally of three distinct kinds, viz., cast iron, wrought iron, and timber.

I found all the cast-iron girders, of which there were several, on the ground, broken in pieces; the wrought iron laying, or rather hanging, from the upper floors, twisted into various shapes; the wooden joists generally entirely consumed, nothing but some small remnants of charcoal indicated where they had been; but there were two wooden beams, which, for some special reason had been cased on two, and perhaps in some parts on three sides with thin iron plates. These beams alone remained *in situ*; both were well laden, and supported heavy and massive articles. I inferred from this, that the application of the thin plates to the sides of the timber, prevented the combustion of the timber, whether by preventing the atmosphere getting at the fibre of the wood or from any other cause is immaterial as long as the result is the same.

As a proof to myself and the engineer whose premises were burnt, he tried the following experiment, viz., selecting two or three pieces of ordinary timber, about 6 or 8 feet long, and say 6 by 4 inches scantling, and covering half their length with thin iron, bolted through on two sides. He had them placed in the furnace of a steam engine; in a short time the uncovered or unprotected wood, was entirely consumed, the parts protected had the sides charred, of course, but the middle of the scantling, desiccated thoroughly, yet quite sufficiently firm and solid to carry nearly if not quite its original load. Acting on this information, several floors were executed, as follows; for instance, in the Sovereign Life Office, corner of St. James's Street and Piccadilly; the British and Magnetic Telegraph and Submarine Station, at the rear of the Exchange, Threadneedle Street. One floor in each, dividing portions of the building separately occupied; some warehouses also for the storage of valuable goods, &c., &c.

Of course the progress of improvement would naturally adopt some of the many useful and ingenious modes of constructing fireproof floors, such as using rolled iron joists quite covered or embedded in concrete; but there are times when a different mode

of construction may be advisable, and the application of a useful beam of wood rendered fireproof by the thin covering of iron not be neglected. Of course the embedding in concrete of iron will also apply to wooden joists without the protecting iron case, and if so, an economy will be the result. Few fireproof floors can be constructed under 6*l.* or 7*l.* per square. I am, however, informed of one in which the constructors claim they can construct it at 5*l.* 16*s.* 9*d.* per square.

I have inquired of a respectable and well-known surveyor the ordinary cost of ordinary flooring. His letter is as follows:—

"10 South Street, Finsbury, E.C.: July 4, 1884.

"Dear Sir,—We have carefully estimated in detail the cost of the fireproof flooring according to and as shown by your section, and we find that for a room of say 24 feet by 16 feet the cost will be 4*l.* 10*s.* 6*d.* per square, being about 7*s.* per square less than an ordinary floor construction, with fir joists 12 inches apart, 1½-inch yellow deal flooring, two courses of herring bone strutting, and lath and half and plaster ceiling. If instead of the floated surface a ¾-inch deal floor laid on thin tar is substituted, similar to some which we recollect being laid by your directions some ten years ago, and with which we believe there has never been any complaint as to vermin or rot, there would be an additional cost of about 14*s.* 6*d.* a square. We estimate the cost per square of the floor as per section at 4*l.* 10*s.* 6*d.*, or with boarded surface at 5*l.* 5*s.* a square. This particular flooring is lower in price than the usual fireproof floor, but upon its durability or other advantages it is not, as you intimated, our province to offer an opinion. We shall be happy to give any further information or details upon the matter.—We are, dear sir, yours faithfully,

"WILLIAM REDDALL & SON,  
"Estimating and Quantity Surveyors."

I have also placed in his hands a sketch of the same idea, but cheaper and doubtless not so perfect, but sufficiently useful to be often used. I also think that the wirework in lieu of lathing, as presented by Mr. Stent, of New York, and of which there is a model or specimen here, might be usefully applied to some of the ordinary floors, giving them some additional immunity from fire.

This question is, however, so serious and important, and so many men and so many minds are engaged in solving the many difficulties of the subject, that I am content to have started it, and now leave to the many eager and intelligent advocates of the various systems and theories, an enumeration of their views.

## SCHOOL BUILDINGS.

**Enfield.**—The foundation-stones of the new schools for the Edmonton Union were laid on the 19th inst. The schools will ultimately accommodate from five to six hundred children. The general scheme may be described as follows:—Entrance lodge next road; some distance in from road, right and left of the ground, two receiving wards; in rear, main building divided into several groups that floors or blocks may be isolated in cases of epidemics or fire, extension made with ease, and the character of a public school imparted, the children meeting for instruction and recreation and then filing off to different block or separate houses. The centre of the group contains master's and matron's quarters, committee room and bedrooms for servants, with stores, bakery, kitchen, dining hall, lavatories, bath, laundries, engineer's shop, boiler house and workshops, with boys and girls and infants' schools grouped round and connected by corridors. These departments overlook large playgrounds open to the sun; beyond is a broad road running transversely to the estate along the sides of which will be cottage homes, each home to have thirty-one children and two foster parents. In a distant part of the land is an infirmary made up of pavilions and more distant still from buildings. The infants' department have school-mistress and nurses' quarters in centre, boys and girls have chief master and mistress, and sub-master and mistress at either end. Taken as a whole the plan is different to that of any other school. The estate is forty-two acres in extent. The architect is Mr. T. E. Knightley. The builder, Mr. Charles Wall. The contract, 54,000*l.*

**Hammersmith.**—The fine building which has been erected for St. Paul's school was opened on Wednesday by the Lord Chancellor. The site contains about sixteen acres, and in consequence the building has been placed at a distance from the road, which allows of a display of its proportions. Brick and terra-cotta of a deep red colour were used for the walls, and the roofing tiles are of the same colour as the walls. The effect is most pleasing. The school is 350 feet in length. There are twenty-four class-rooms, each 30 feet by 24 feet, two large lecture theatres, and a hall at the west end measuring 80 feet by 40 feet. Laboratories, drawing schools, &c., are also provided, as well as a dining-room and kitchens. The house for the head master is close to the road, and forms a picturesque group. A cloister leads to the main building. In the rear of the school is a large playground with seven fives' courts, and a swimming bath and gymnasium will shortly be constructed. The school will eventually accommodate about 1,000 boys. Mr. Waterhouse, A.R.A., is the architect.



## CHURCH BUILDING AND RESTORATION.

**Bootle.**—On Sunday, the 20th inst., the foundation-stone of a Roman Catholic church to be erected, together with a presbytery, in Marsh Lane, Bootle, Liverpool, for the Very Rev. Dean Kelly, was blessed by the Bishop of Liverpool, the Right Rev. Dr. O'Reilly, in the presence of the Bishop of Trenton, New Jersey, U.S.A., and a numerous body of clergy and laity. The presbytery has accommodation for four priests, and the church, which is of large proportions, is designed in the style of the Early Decorated period, and built of local red sandstone, the wall facings being hammer-dressed. It has a spacious nave, aisles, and chancel, with carefully-arranged confessionals, and is 63 feet wide internally and 152 feet long. Messrs. Hadfield & Son, of Sheffield, are the architects, and Mr. W. Haworth is acting under them as clerk of the works. Messrs. G. Woods & Son, of Stanley Road, Bootle, are the contractors, their foreman being Mr. Bishop.

**Manchester.**—The corner-stone of the church of St. Agnes, Slade Lane, Longsight, was laid on the 19th inst. The plot devoted to the sites of the church and parsonage is triangular, the church standing at the base or northern side, and the parsonage on the south side of the church. The church, as now being built, will seat rather over 500 adults; but the scheme provides for an addition of 100 or more. The plan comprises a broad nave of four bays. Another narrower bay marked off from the wider portion by a pointed arch of two "orders" of mouldings. On the south side, at the south-west corner of the nave, is a spacious porch gabled to the south. At the centre of the west end is a semi-octagonal baptistery, with a tall-pointed arch opening into the church, and tall-pointed windows piercing three of its sides. The chancel—semi-hexagonal in shape at its eastern end—is raised seven steps. It has around the sides twelve arches, eight of them pierced with long-pointed windows, with stone-cusped heads, and four with panels only, with cusped and pierced circles above them. These window-cills are kept well up, and the space below them is panelled or arched in brick. On the south side there will be sedilia and a credence. The walls inside will be lined to about window-cill height with brown glazed brick, above this with yellowish bricks from Ruabon. The windows are framed, as it were, in red brick. The cornices and arches generally are of the same material; but the chancel arch has stone voussoirs alternating with the brick. The glazing is arranged to be in patterns of pale-tinted thick glass, with lines of brighter glass in the margin. The walls generally outside are to be of grey brick, with red for the framing in the windows and for quoins and other parts. The strings, labels, and moulded parts are of terra-cotta. Though there will be stone in pillars, capitals, and bases, and in cills and cusped heads of windows and elsewhere, the church is a brick one. It is designed by the architects, Messrs. Medland & Henry Taylor, in brick, and would not be suitable for erection in any other material. The foundations have cost under 150*l.* The superstructure, as above described, has been let for 2,700*l.*, with 112*l.* for additional cost of a wood block floor.

## NEW BUILDINGS.

**Haverfordwest.**—The Town Council of Haverfordwest have decided upon the erection of a public abattoir, according to plans prepared for the purpose by Mr. T. P. Reynolds, architect, Haverfordwest, which have received the approval of the Local Government Board. The site has been presented by Lord Kensington, M.P. The undertaking will be proceeded with without delay. The contractor for the building is Mr. Thomas Jenkins, of Telcomb, near Haverfordwest, at 1,560*l.*, and for the ironwork and machinery Messrs. A. Gardiner & Sons, of All Saints' Ironworks, Bristol, at 240*l.*

**New Oscott.**—The Princess Alice Orphanage has been opened. An estate of eighteen acres was purchased for 2,747*l.*, and when all the buildings are erected there will be accommodation for 300 children. At present only a part of the plan has been executed. The general plan of the orphanage is to have groups of separate cottage homes. Each will have its own enclosure of garden or orchard, and workshops will be erected for instruction in useful trades. The present part of the orphanage consists of the common hall, kitchen and servants' offices, board-room, administrative offices, and governor's house. When the whole scheme is carried out, twelve cottages will have been erected, six for boys and six for girls, each to accommodate a "family" of about twenty-five children. The building is chiefly of red brick, with tiled roofs. The architect is Mr. J. L. Ball, Warwick Chambers, Birmingham, and the work has been carried out by Messrs. Wilson & Son, Soho Hill, Birmingham.

**The Directors of Perry and Co. (Limited),** have resolved to pay on September 1, out of profits, an interim dividend on the ordinary shares for the first six months of this year at the rate of six per cent. per annum tax free, being at the same rate as for the corresponding period last year. The half-yearly dividend on the preference shares will be paid as usual at the fixed rate of 5 per cent. per annum, and free of income tax.

## GENERAL.

**Mr. Josiah Conder, A.R.I.B.A.,** architect to the Japanese Government, has obtained the Royal license to accept and wear the insignia of the fourth class of the Order of the Rising Sun, which has been conferred upon him in recognition of his services.

**An Exhibition of Paintings,** drawings, and engravings illustrative of ancient and modern Rouen will be held in the Musée Bibliothèque of the city during August and September.

**M. Daray,** a pupil of M. Guadet, has obtained the prize given at the end of the year to students of the Ecole des Beaux-Arts, Paris, for his drawings of a chimney-piece at Fontainebleau.

**An Industrial Art Exhibition** is to be opened shortly in Geneva. It will comprise works in metal, pottery, enamel, chasing, &c. If the experiment is successful it will be again repeated.

**Mr. O. L. Warner,** the American sculptor, has completed a statue of William Lloyd Garrison, the abolitionist, which is to be erected in New York.

**The Prize** which was founded by M. Deschaumes, to reward young architects, "vivant dans la plus parfaite union avec une ou plusieurs sœurs," has been divided between MM. de Sévelinque and Margotin. It amounts to 1,500 francs.

**Earl Nelson** will open the Art and Industrial Exhibition to be held in Newbury next September.

**Sir Edward Baines** has agreed to a request from the Mayor of Leeds to sit for his portrait which it is intended to hang in the Corporation buildings.

**Mr. D. W. Stephenson, A.R.S.A.,** has executed a life-size alto-relievo bust in marble of the late Canon Battersby, which is to be placed in the south aisle of St. John's Church, Keswick.

**The Annual Meeting** of the Bristol and Gloucestershire Archaeological Society commenced at Evesham on Wednesday.

**The Birmingham Art Gallery** has obtained the drawing *La Marseillaise*, by Gustave Doré; a landscape in oil, by Mr. F. W. Hulme; and a drawing by Mr. David Cox, jun., of *Greenfield*, the residence occupied for so many years by David Cox, at Harborne.

**An anonymous Donor** has offered 20,000*l.* towards erecting a building in Edinburgh for the joint accommodation of a National Portrait Gallery and a Museum of Antiquities.

**A Treaty** has been concluded between the French and Japanese Governments for the exchange of works of art.

**The Theatre Français** is about to acquire the statues of Molière by M. Caudron and Corneille by M. Falguère, which will be placed in the niches in the vestibule hitherto occupied by the statues of Rachel and Mars.

**A Plot of Ground in Melbourne** having a frontage of 16 feet and a depth of 130 feet has been sold for 13,120*l.* This is supposed to be the highest price paid for a building site in the city.

**A Faculty** has been granted for the enlargement of Christ Church, Clifton, on the condition that a bond for 2,000*l.* be lodged at the registry before the sealing of the faculty if the whole sum required for the contract is not subscribed.

**A New Vicarage** has just been commenced for the parish of Wick, near Bath. The architect is Mr. W. L. Bernard, of 39 Broad Street, Bristol, and the contractor, Mr. J. B. Hudson, of Yate, Chipping Sodbury.

**A Competition** was lately instituted by Messrs. Willing & Partners, Leeds, for the conversion of the old Corporation Gas Offices, Boaz Lane, into an hotel, restaurant and bodega. The designs of Mr. Nelson, architect, Leeds, have been awarded the first, and those of Mr. James Ledingham, architect, Bradford, the second premium. Mr. Watson, architect, Leeds, was the referee.

**Drury Lane Theatre,** having been re-let to Mr. Harris for a further term of five years, is to be repaired and decorated at the expense of the lessee. The rent is 6,000*l.* a year, with an additional sum of 10*l.* for every extra performance.

**The Arboretum in Walsall** has been acquired by the Corporation at a cost of 4,600*l.* Reed's Wood, containing forty-six acres, has also been bought, and a site for a Science and Art Institute in Bradford Street.

**A Strike** of five thousand bricklayers, with their labourers, has taken place in New York for a reduction of the duration of the day's labour to nine hours. The majority of the employers yielded at once, as the strike, if protracted, would stop the work on many new buildings.

**Messrs. Robert Boyle & Son,** 64 Holborn Viaduct, E.C., and Glasgow, have recently applied their system of ventilation to the headquarters of the Honourable Artillery Company, Finsbury; Liberal Club, Sheffield; Burton Club, Burton-on-Trent; County Hall, Menai Bridge; Franciscan Convent, Bridgwater; New Lecture Hall, Newcastle-on-Tyne; Bromley and Beckenham Joint Hospital; New Public Baths, Lewisham; London and County Bank; St. Austell Union; Hull Workhouse, Hull; New Workhouse, Wandsworth; Richmond Union, Surrey; Hanwell Police Station; New Police Station, Mitcham; H. M. Prison, Leicester; and H. M. Prison, Manchester.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, JULY 26, 1884.

### TENDERS, ETC.

\* \* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

\* \* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—  
"Contract Supplement to THE ARCHITECT."

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### COMPETITIONS OPEN.

NORTH SHIELDS.—Aug. 18.—Plans are required for Alterations and Additions to the Workhouse. Mr. Christopher Scott, Guardians' Hall, North Shields.

### CONTRACTS OPEN.

ASHBOY.—July 26.—For Building Schools. Mr. W. Hague, Architect, 62 Dawson Street, Dublin.

BANBURY.—August 5.—For Building Three Shops and Cottage. The Banbury Co-operative Industrial Society.

BELFAST.—For Additions to House. Mr. John Malcolm, 14 Victoria Street, Belfast.

BELFAST.—July 28.—For Building Artisans' Dwellings for the Doagh Spinning Company. Mr. John Lanyon 1 Alexandra Chambers, Lombard Street, Belfast.

BERRY BROW.—For Building Chapel. Mr. J. H. Burton, Architect, Warrington Street, Ashton-under-Lyne.

BIRMINGHAM.—Aug. 28.—For Erection of Kitchen and other Buildings at the Workhouse. Mr. W. H. Ward, Architect, Paradise Street, Birmingham.

BRAMCOTE.—For Building Schools. Messrs. W. & R. Booker, Architects, Short Hill, Nottingham.

BROMLEY.—Aug. 13.—For Construction of Cant Clough Reservoir and Works in connection. Mr. E. Filliter, 16 East Parade, Leeds.

CLIPSTON.—For Restoration of Church. Rev. C. F. Blyth, Clipston Rectory, Northampton.

COVENTRY.—Aug. 6.—For Rebuilding Premises. Mr. T. W. Whitley, Architect, Bank Chambers, Coventry.

DARLINGTON.—For Additions to Property in Bondgate. Mr. Francis Parr, Architect, 6 Duke Street, Darlington.

DENTON.—For Building Villa Residence. Messrs. T. D. & J. Lindley, Architects, Henry Square, Ashton-under-Lyne.

EAST MOSELEY.—For Building Wesleyan Sunday-school. Mr. Charles Bell, Architect, Dashwood House, 9 New Broad Street, E.C.

ELLAND.—July 28.—For Building Four Cottages. Mr. John Mortimer, Architect, Elland.

GROSMONT, WHITEY.—Aug. 1.—For Completing Tower and Spire of St. Matthew's Church. Mr. Charles Noel Armfield, Architect, Whity.

HALIFAX.—Aug. 1.—For Building House. Messrs. Leeming & Leeming, Architects, Northgate Chambers, Halifax.

HERNE BAY.—For Building Wesleyan Church. Mr. C. Bell, Architect, Dashwood House, 9 New Broad Street, E.C.

HINDLEY.—For Building Eight Dwelling-houses. Messrs. H. Walls & Son, Surveyors, 8 King Street, Wigan.

HORNSEY.—July 31.—For Additions to Local Board Offices. Mr. T. de Courcy Meade, Surveyor to the Local Board, Southwood Lane, Highgate, N.

HUDDERSFIELD.—July 31.—For Additions to Armitage Bridge Mills. Messrs. John Kirk & Sons, Architects, Huddersfield.

HUNSLLET.—Aug. 1.—For Building Twenty-two Houses Mr. John E. Leek, Architect, Hunsllet.

INCHBROOM.—Aug. 1.—For Bridge over the Lossie (Mac'onry and Ironwork). Mr. H. J. Mackenzie, C.E., Elgin.

LITTLE CHART.—July 28.—For Building House at Paper Mills. Mr. Luke Langley, Estate Agent, Little Chart, Ashford.

LONDON.—Aug. 4.—For Building Fire Brigade Station, Bishopsgate Street. Mr. J. E. Wakefield, Metropolitan Board of Works Office, Spring Gardens, S.W.

LONGLANDS.—For Erection of Farm Buildings. Messrs. Powell & Grant, Architects, L'andloes, Montgomeryshire.

LOWESTOFT.—July 29.—For Building Warehouse, Raglan Works. Mr. W. B. Cockrill, Architect, Glencoe House, Gorleston.

MACCLESFIELD.—Aug. 2.—For Building Boiler House and Supplying Boiler. Mr. G. H. Corbishley, Secretary, General Infirmary, Macclesfield.

MIDLAND RAILWAY.—Aug. 1.—For Repairs and Painting to Station Buildings at Calverley, Normanton, Cudworth, and Barnsley. Mr. A. A. Langley, C.E., Engineer's Office, Derby.

MOUNTAIN ASH.—Aug. 5.—For Extension of Miskin Schools. Mr. Moses Cule, Architect, Pentrebach, Pontypridd.

MYNYDDISLWYN.—July 29.—For Building School and Teacher's House at Crumlin. Mr. E. A. Lansdowne, Architect, 26A High Street, Newport.

NEWBURY.—Aug. 4.—For Building School and Master's House for Governors of St. Bartholomew's Grammar Schools. Mr. J. P. Power, Architect, 67 Basinghall Street, E.C.

NEWQUAY.—July 31.—For Building Three Dwelling Houses. Mr. A. S. Clunes, Architect, Fowey.

NORTHAMPTON.—Aug. 6.—For Repairs and Reseating Church. Mr. E. Ashworth, Architect, Exeter.

PLYMOUTH.—Aug. 5.—For Building Wing to Female Orphan Asylum. Mr. James H. Keats, Architect, Courtenay Street, Plymouth.

PRESTON.—Aug. 20.—For Construction of Dock, Tidal Basin, Locks, Diversion of River, &c. Mr. E. Garlick C.E., 33 Winckley Square, Preston.

SHIPLEY.—July 28.—For Building Chapel Keeper's House, Class-rooms, &c. Mr. S. Wright, Architect, Church Street, Windhill.

SMETHWICK.—July 31.—For Building Mortuary. Messrs. Harris, Martin & Harris, Architects, 119 Colmore Row, Birmingham.

SOUTHAMPTON.—For Alterations to Church of St. James. Mr. Mitchell, Architect, 8 Portland Street, Southampton.

STONEFOLD, HASLINGDEN.—For Building Proposed Church. Mr. E. L. Pain, 19 Buckingham Street, Strand, London.

SWANSEA.—July 28.—For Building Shops and Premises. Messrs. James, Seward & Thomas, Architects, Castle Buildings, Swansea.

WELLINGTON.—Aug. 2.—For Building Town Hall and Additions to Markets. Mr. E. T. Howard, Architect, Wellington, Somerset.

WEST VALE.—July 28.—For Building Sunday School. Mr. W. H. D. Horsfall, Architect, Albany Chambers, Halifax.

WOOTTON BASSETT.—Aug. 1.—For Erection of Cattle Shed and Yard at Manor Farm, Broad Town. Mr. Richard Darley, Architect, Chippenham.

WORTLEY.—July 28.—For Erection of Schools, Out-buildings, and Boundary Walls. Mr. R. L. Adams, Architect, Imperial Buildings, Bond Street, Leeds.

### TENDERS.

#### ASHFORD.

For Rebuilding No. 77 High Street, Ashford.	Mr. W. R. King, Architect, 22 Bank Street, Ashford.	Quantities supplied.
Giles, Burden, & Giles, Ashford		£665 0 0
Wood, Ashford		646 0 0
Brooks, Folkestone		640 0 0
Hughes, Ashford		635 0 0
Baker, Ashford		630 0 0
Denne & Son, Deal		629 0 0
Bingham, Headcorn		627 0 0
Howland & Son, Ashford		620 0 0
TOURNAY & BROS., Ashford (accepted)		678 18 0
Architect's estimate		630 0 0

#### BOOTLE.

For Erection of Wadham Road Board School, for the Bootle-cum-Linacre School Board.	Mr. ALEX. BLEAKLEY, Architect, Birkenhead and London.	Quantities by the Architect.
Roberts, St. Helens		£8,820 0 0
Yates, Everton, Liverpool		7,999 0 0
Forde, Birkenhead		7,824 0 0
Mullholland & Son, Great Crosby		7,655 0 0
Fairbridge & Hatch, Birkdale		7,400 0 0
Holme, Seaforth		7,400 0 0
Lelsie, Bootle		7,225 0 0
Urmsen, Liverpool		7,199 0 0
Bell & Burney, Bootle		7,150 0 0
W. & G. Johnson, Seaforth		7,125 0 0
Webster, Bootle		7,070 0 0
Brown & Backhouse, Liverpool		7,043 0 0
R. C. & R. J. Eskridge, Seaforth		6,895 0 0
Tyson, Liverpool		6,815 0 0
PORTER, Warrington (accepted)		6,706 0 0
Architect's estimate		6,700 0 0

#### BRISTOL.

For School Buildings, Vestry, Party-wall, &c., at East Street, Bedminster, Bristol.	Mr. ALFRED HARFORD, Architect and Surveyor, 30 Broad Street, Bristol.	Quantities by the Architect.
Beaven		£685 0 0
Hayes		670 0 0
Forse		670 0 0
Cowlin		669 0 0
Crocker		617 0 0
James		539 0 0
H. J. Rossiter		535 0 0
Johns		500 0 0
HARRY ROSSITER (accepted)		497 0 0

#### BROSELEY.

For Renovation and Re-seating, &c., of Birch Meadow Chapel, Broseley.	Mr. S. K. BLAND, Architect, Ipswich.	
R. & J. Millington, Oakengates		£224 0 0
W. & T. Bailey, Ironbridge		213 0 0
SMITH, Broseley (accepted)		211 16 0

#### CARDINGTON.

For Erection of a Five-quarter Brewery at Cardington, Beds., for the Cardington Brewery Co., Limited.	Mr. F. T. MERCER, Architect, 24 St. Paul's Square, Bedford.	Quantities supplied.
HARRISON, Bedford (accepted)		£450 0 0
This was the lowest tender.		

#### CHESTER.

For Heating Presbyterian Church, Chester, with Registered "The Small Tube" Hot-Water Apparatus.	King (Limited), Liverpool	£104 0 0
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## DEPTFORD.

For Erection and Completion of new Hay Stores at Foreign Cattle Market, Deptford, for the Corporation of the City of London. Mr. HORACE JONES, Architect. Quantities by Messrs. William Reddall & Son.

Hubble & Trott	£4,100	0	0
Hobbs	4,011	0	0
Staines & Son	3,864	0	0
Dickinson	3,748	10	0
Gentry	3,650	0	0
Howell & Son	3,617	0	0
Greenwood	3,563	0	0
Dickeson	3,500	0	0
Nightingale	3,380	0	0
Morter	3,306	0	0
Mowlem & Co.	3,299	0	0
RICHARDSON (accepted)	3,104	0	0

A. All walls in Brickwork.

Hubble & Trott	4,142	0	0
Staines & Son	3,838	0	0
Dickinson	3,814	13	0
Gentry	3,610	0	0
Howell & Son	3,527	0	0
Greenwood	3,521	0	0
Dickeson	3,440	0	0
Nightingale	3,400	0	0
Mowlem & Co.	3,313	0	0
Morter	3,183	0	0
RICHARDSON (accepted)	2,979	0	0

B. Internal walls in Concrete.

Hubble & Trott	4,247	0	0
Staines & Son	4,004	0	0
Dickinson	3,818	0	0
Howell & Son	3,733	0	0
Gentry	3,683	0	0
Greenwood	3,521	0	0
Morter	3,456	0	0
Nightingale	3,415	0	0
Dickeson	3,400	0	0
Mowlem & Co.	3,332	0	0
RICHARDSON (accepted)	2,983	0	0

C. "Imperial Stone" Paving instead of York Stone.

## DEWSBURY.

For Erection of a Lawn Tennis Grotto at Stonehyrst, for Mr. Geo. H. Oldroyd. Mr. FREDERICK W. RIDGWAY, Architect, Dewsbury.

Chadwick & Sons, joiner	£71	1	0
Kayll & Co., Leeds, stained glass	11	5	0

Total £82 6 0

For Alteration of Business Premises, Dewsbury, for Mr. J. Lidbetter. Mr. FREDERICK W. RIDGWAY, Architect Dewsbury.

Bagshaw & Sons, ironfounder	£84	10	0
Fothergill & Schofield, joiner	63	13	0
Hart & Brier, mason	66	14	2
Shepley, plumber	29	13	10
Hart & Brier, pavior	27	0	0

Total £277 1 0

For Alteration of Premises in Northgate, Dewsbury, for Mr. Dalton. Mr. FREDERICK W. RIDGWAY, Architect, Dewsbury.

Walshaw, joiner	£87	13	0
Cooper, mason	66	0	0
Balmforth, plumber	54	6	10
Shaw, jun., plasterer	50	4	0
Hargreaves, slater	6	5	9
Triggs, electric bells	6	1	6

Total £270 11 1

For Building Wesleyan Mission Chapel, Eastborough, Dewsbury. Mr. FREDERICK W. RIDGWAY, Architect, Dewsbury. Quantities by the Architect.

Accepted Tenders.

Hart & Brier, mason and bricklayer	£377	5	0
Garthwaite & Blackburn, joiner	262	0	0
Shepley, plumber	56	0	0
Hargreaves, slater	43	0	0
Broadbent, plasterer	28	5	0
Ramsden, painter	13	11	0

Total £786 1 0

## EPSOM.

For Construction and Completion of a Circular Underground Reservoir, 30 feet in diameter and 32 feet deep, Epsom. Mr. J. R. HARDING, Surveyor.

Abraham	£2,425	0	0
Higgs	1,972	0	0
Bobbin Bros.	1,250	0	0
Wood & Co.	1,137	15	6
Carter	1,095	0	0
Catley	975	0	0
Morris	924	10	9
Chamberlain	883	5	0
Peters	871	12	0
Beatty	764	7	7
Potter	820	0	0
WOODHAM & FRY (accepted)	749	0	0

## FOREST GATE.

For completing Eight Houses on the Colville Hall Estate, Forest Gate, for the Land Investment Company, Limited. Messrs. WHITMORE & REEVES, Surveyors, 14 Devonshire Square, Bishopsgate.

Barkel, Plaislow	£1,270	0	0
Rice, Peckham	1,120	0	0
Pollard, Forest Gate	950	0	0
Martin, Stratford	896	0	0
R. & W. Foster, Custom House	810	10	0
Brickell, Manor Park	775	4	0
Beale, Cambridge Heath	695	0	0
Sayer, Leyton	603	0	0
Richardson, Stratford	590	0	0
Feary, London	590	0	0
FEARY, London (reduced and accepted)	508	0	0

## GRAYS.

For Erection of Wesleyan Chapel, Grays, Essex. Mr. CHAS. BELL, F.R.I.B.A., Architect. Quantities by Mr. Henry Lovegrove, 26 Budge Row, E.C.

Prentiss & Co.	£3,691	0	0
Carter	3,210	0	0
Anley	3,060	0	0
Brown	2,972	0	0
Baxter	2,796	0	0
Thompson & Son	2,786	0	0
Everett & Son	2,775	0	0
Green	2,742	0	0
Archer	2,740	0	0
Wood	2,608	0	0
Brickell	2,400	0	0

## GRIMSBY.

For Erection of Liberal Club at Great Grimsby. Mr. CHAS. BELL, F.R.I.B.A., Architect, London and Grimsby.

Summerson	£3,756	0	0
Haywood	3,477	0	0
Smith	3,361	0	0
Kirk	2,995	0	0
Willows & Roebuck	2,955	0	0
Nightingale & Danby	2,949	0	0
Chapman	2,910	0	0
RIGGALL & HENRIES (accepted)	2,675	0	0

## HALIFAX.

For Five Cottages at New Row, Holy Well Brook, near Halifax. Mr. T. L. PATCHETT, Architect, Halifax.

Walker, Stainland, excavator and mason.

Collins & Hirst, Swood, carpenter and joiner.

Total—£345.

## HASTINGS.

For Rebuilding Congregational Church, Robertson Street, Hastings. Mr. H. WARD, Architect, 8 Bank Buildings, Hastings.

Dobson	£8,240	0	0
Moon & Co.	8,200	0	0
Hughes	8,200	0	0
Rodda	8,100	0	0
Vidlier	7,854	0	0
Peters	7,747	0	0
Jones & Co.	7,744	0	0
Taylor Bros.	7,598	0	0
Walker	7,560	0	0
Woods	7,500	0	0
Jenkins	7,450	0	0
H. E. Cruttenden	7,380	0	0
Bingham	7,300	0	0
F. Cruttenden	7,299	0	0
Foster	7,142	0	0
Higgs	7,120	0	0
Eldridge & Cruttenden	7,100	0	0
Howell & Son	7,000	0	0
Clarke	6,526	0	0

## LIVERPOOL.

For Heating New Portion of Northern Hospital, Liverpool. Renton Gibbs.

For Hot-water Supply, Infectious Hospital Tents, Dingle Hill, Liverpool.

RENTON GIBBS (accepted).

For Heating Apparatus for Messrs. Wilson & Co's Premises, Sandygate, Ayr.

RENTON GIBBS (accepted).

For Construction of Hot-water Heating Apparatus for South Australian Government Institute. Renton Gibbs.

## LLANDDAROG.

For Building a Vicarage House, &c., at Llanddarog. Mr. D. JENKINS, Gorlas, Llandeibie, R.S.O., Architect.

Vicarage House.

Morgan & Griffiths, Carmarthen	£1,284	0	0
Lewis, Swansea	1,040	10	0
EVANS, Carmarthen (accepted)	1,000	0	0
Architect's estimate	1,099	0	0

Outbuildings.

Evans, Carmarthen	139	0	0
Morgan & Griffiths, Carmarthen	121	0	0
Lewis, Carmarthen	100	10	0
Architect's estimate	99	0	0

## LONDON.

For Rebuilding No. 80 Wimpole Street, W., for Mr. G. Buckstone Browne, F.R.C.S. Mr. CHAS. H. WORLEY, Architect. Quantities by Mr. R. C. Glead.

Lawrance & Sons	£4,950	0	0
Patman & Fotheringham	4,835	0	0
Andrew & Nanson	4,695	0	0
Downs	4,050	0	0
Robinson	3,926	0	0

For New Building on the Site of Mugeridge's Granaries, Queen Victoria Street, E.C. Mr. WIMBLE, Architect.

Lawrance & Sons	£13,797	0	0
Dove Bros.	12,755	0	0
Hall, Beddall & Co.	12,250	0	0
Ashby & Horner	12,079	0	0
Colls & Sons	12,995	0	0
Morter	12,379	0	0
Scrivenner & Co.	12,841	0	0
Brass	12,473	0	0

For the Election of Warehouse, Offices, &c., Millwall, E., for Mr. J. T. Morton, under the superintendence of Mr. WILLIAM EVE, 10 Union Court, Old Broad Street, E.C.

Perry	£4,501	0	0
D. D. & A. Brown	4,466	0	0
Holland	4,400	0	0
Heiser	4,331	0	0
Linn	4,195	0	0
Salt	3,995	0	0
Higgs	3,900	0	0
Downs	3,860	0	0
HARRIS & WARDROP (accepted)	3,833	0	0

## LONDON—continued.

For Additions to Offices of Hornsey Local Board, at Southwood Lane, Highgate, N. Mr. T. DE COURCY MEADE, Surveyor.

Kerry & Son	£6,770	0	0
Gibbs & Imber	6,200	0	0
Houghton	5,628	0	0
Kewley	5,585	0	0
Greenwood	5,543	0	0
Nightingale	5,480	0	0
McCormack & Son	5,397	0	0
Wall	5,382	0	0
Tongue	5,260	0	0
LAWRANCE & SONS (accepted)	5,243	0	0

For Alterations and Additions to Workhouse, High Street Poplar. Mr. G. MORRIS, Architect, 6 Oriental Street, East India Road, Poplar.

Smith	£4,100	0	0
Sherwood	3,850	0	0
Deacon	3,600	0	0
Alexander	3,495	0	0
R. & E. Evans	3,505	0	0
Stephenson	3,503	0	0
Hack	3,496	0	0
D. & A. Brown	3,490	0	0
Robson	3,365	0	0
Aldridge & Jenvens	3,289	0	0
Howell & Son	3,279	0	0
Walker	3,270	0	0
Johnson	3,128	0	0
Harper	3,040	0	0
Curnow	3,033	0	0
Hunt	3,026	0	0
HARRIS & WARDROP (accepted)	2,994	0	0

For Erection of First Part of the Kensington Academy for Girls, Addison Road, W. Mr. HUGH M'LACHLAN, Architect. Quantities by Messrs. M'Lachlan & Curson.

Laing & Son	£5,787	0	0
Stafford	5,769	0	0
Staines & Son	5,555	0	0
Scharien & Williams	5,527	0	0
D. D. & A. Brown	5,463	0	0
Howell & Son	5,350	0	0
R. & E. Evans	5,280	0	0
Peto Bros.	5,247	0	0
Wall	5,220	0	0
Bolding	5,187	0	0
Tyerman	5,136	0	0
Allen & Sons	5,030	0	0
Stephens & Bastow	4,999	0	0
Howard	4,963	0	0
Priestley & Gurney	4,894	0	0
Stephenson	4,852	0	0
Williamson	3,263	0	0

For Alteration and Adaptation of Old Monastery Buildings to form New Gut Stores at the Foreign Cattle Market, Deptford, for the Corporation of the City of London. Mr. HORACE JONES, Architect. Quantities by Messrs. William Reddall & Son.

Hubble & Trott	£1,867	0	0
Hobbs	1,817	0	0
Howell & Son	1,598	0	0
Staines & Son	1,514	0	0
Dickeson	1,530	0	0
Richardson	1,399	0	0
Greenwood	1,353	0	0
Nightingale	1,340	0	0
Gentry	1,290	0	0
Dickinson	1,253	12	11
Morter	1,249	0	0
MOWLEM & CO. (accepted)	1,246	0	0

A. If with York Stone Paving.

B.

Hubble & Trott	1,810	0	0
Hobbs	1,810	0	0
Howell & Son	1,524	0	0
Staines & Son	1,526	0	0
Dickson	1,418	0	0
Richardson	1,349	0	0
Greenwood	1,251	0	0
Nightingale	1,285	0	0
Gentry	1,235	0	0
Dickinson	1,244	7	5
Morter	1,231	0	0
MOWLEM & CO. (accepted)	1,209	0	0

B. If with "Imperial Stone" Paving.

## MARGATE.

For Erecting Patent Hot-water Heating Apparatus at the Royal Assembly Rooms, Margate.

Bacon & Co.

## MORLEY.

For Heating Wesleyan Schools, Morley, with Registered "The Small Tube" Hot-water Apparatus.

King (Limited), Liverpool	£208	0	0
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## NORTHFLEET.

For Erection of Mission Chapel, Northfleet, Essex. Mr. CHAS. BELL, F.R.I.B.A., Architect.

Gould	£779	0	0
Mitchell	630	0	0
Wallace	610	0	0
Hopkins	580	0	0
TUFFEY (accepted)	510	0	0
Martin	505	0	0
Dering	437	0	0

## NOTTINGHAM.



## NORWOOD.

For Alterations and Additions, Boundary Walls, &c., to Highland Lodge, Fox Lane, Upper Norwood, for Mr. Frederic Hetley, M.D. Mr. FREDERIC W. LEDGER, Architect.

Jenkin . . . . .	£1,304 10 0
Woodward . . . . .	1,116 0 0
J. & C. Bowyer . . . . .	1,090 0 0
Nightingale . . . . .	1,088 0 0
SMITH & SONS (accepted) . . . . .	1,082 0 0

## PETERBORO'.

For Restorations after fire and Additions to Peterboro' Infirmary. Mr. H. M. TOWNSEND, A.R.I.B.A., Architect. Quantities by Mr. H. Lovegrove. Messrs. THOMPSON & SONS (accepted).

## SHIRWELL.

For complete Restoration of St. Peter's, Shirwell, North Devon. Mr. W. WHITE, F.S.A., Architect, 30A Wimpole Street, London. DART, Crediton (accepted).

## SANDHURST.

For Erection of New Stabling, Kitchen Garden and Terrace Walls, &c., Sandhurst, for Lieutenant-Colonel Harvey. Mr. W. RAVENSCROFT, Architect, Reading. Quantities by Messrs. Cooper & Sons, Reading and Maidenhead.

Grover, Reading . . . . .	£2,894 0 0
Lawrance & Sons, London . . . . .	2,830 0 0
Margetts, Reading . . . . .	2,752 13 8
Smallwood & Co., Birmingham . . . . .	2,750 0 0
T. Higgs, Goring . . . . .	2,641 16 8
Rider & Son, London . . . . .	2,588 0 0
H. Higgs, Reading . . . . .	2,548 0 0
Searle, Reading . . . . .	2,520 0 0
BOTTRILL, Reading (accepted) . . . . .	2,373 0 0

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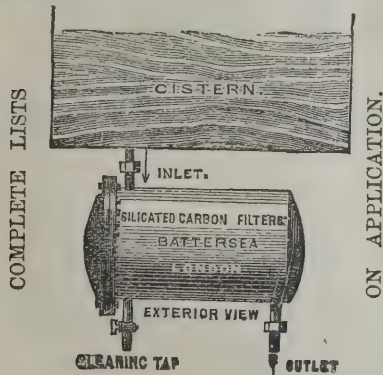
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## VENTNOR.

For Erection of Boiler-room, Coal Store, &c., and Excavating for the Basement and Subway to the proposed "Jones Memorial Block" at the Royal National Hospital for Consumption, Ventnor, Isle of Wight. Mr. T. HELLIER, Architect, Ryde, Isle of Wight. Quantities supplied by Mr. H. P. Foster, 5 John Street, Adelphi, W.C.

Barton . . . . .	£1,350 0 0
INGRAM & SONS (accepted) . . . . .	1,295 0 0

## WOLHAMPTON.

For Erection of first portion of proposed New Buildings at St. Mary's College, Wolhampton, near Reading, Berks. Mr. WALTERS, A.R.I.B.A., 4 Great Queen Street, Westminster, S.W., Architect.

Norris . . . . .	£5,884 0 0
Parmenter . . . . .	5,560 0 0
Kemp . . . . .	5,399 0 0
Kimberley . . . . .	5,110 0 0
Claridge . . . . .	5,071 0 0
BUCKLE & WHEELER (accepted) . . . . .	4,350 0 0

## YARMOUTH.

For Erection of Warehouse, &c., Theatre Plain, Great Yarmouth, for Mr. W. G. Knowles. Messrs. BOTTLE & OLLEY, Architects.

Barnard . . . . .	£1,532 0 0
Rand & Cooper . . . . .	1,266 0 0
Davy . . . . .	1,248 0 0
E. Howes . . . . .	1,244 0 0
Leggett . . . . .	1,240 0 0
T. Howes . . . . .	1,230 0 0
Bray . . . . .	1,199 0 0
Cork & Beech . . . . .	1,198 0 0
COOPER (accepted) . . . . .	1,184 0 0

## YARMOUTH—continued.

For Erection of First Portion of Curate's House to St. Paul's Mission Church, for Rev. Canon G. Venables, Vicar of Great Yarmouth. Messrs. BOTTLE & OLLEY, Architects.

Cornish & Gaymer . . . . .	£385 0 0
Cork & Beech . . . . .	927 0 0
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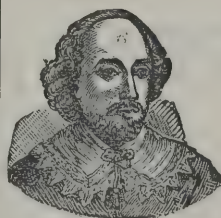
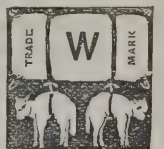
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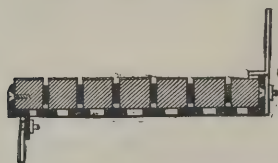
# LINDSAY'S

## IMPROVED PATENT REVERSIBLE TREADS & LANDINGS

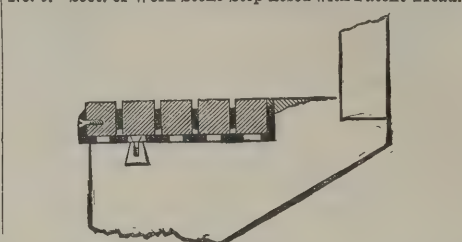
### FOR EVERY DESCRIPTION OF STAIRCASE.

THIS Patent is an improvement on the well-known wooden block construction, and its speciality is that the wooden blocks in each Tread can be removed and transposed so many times that it is almost indestructible besides being noiseless.

No. 3.—Section of Tread showing Iron Risers.



No. 6.—Sect. of Worn Stone Step nosed with Patent Tread.



No. 8.—Section of Tread reversed, the worn portion underneath, and new face presented for traffic. In this case the original level is maintained by iron grids that fit into the channels on the underside.



In Hospitals, or places where it is desirable to be free from dust, the blocks can be placed close together, not leaving any cracks, so that the treads or landings can be swept or washed quite clean; also, if it be necessary to get light under a Staircase or Landing, rough glass blocks can be fitted in the Iron frames, side by side with the wood, and a subdued light thus obtained.

Each Tread is so constructed that the wooden blocks of which it is composed can be removed by taking off the brass or iron nosing of the tray, so that when the outer edge of the wood is worn, the blocks can be taken from the front and those next the riser (which will be quite intact) substituted. The worn blocks, after being reversed, are slid into the position next the riser. This at once gives the tread the appearance of being quite new, and ready for prolonged wear. When in their turn the nosing blocks again become worn, the same operation can be effected by transposing the unused blocks from the sides of the tread to the front, and so on until all are in turn utilised. Finally, when in the course of years the wood is worn out, the trays can be re-filled at a very small cost; and if they should not require entire re-filling, can be re-nosed with new blocks for a few pence. Skilled labour is not required in removing or transposing the blocks. These advantages are so obvious that remark is superfluous, and the many years the Wooden-block Treads have proved their efficiency, places the durability of this construction beyond doubt. It has already been adopted by some of the leading Architects and Engineers. The Patentee generally uses Oak, Elm, or Teak, in these Treads, but, if an exceptionally durable Staircase is required, employs "Jarrah" (an Australian mahogany of extreme hardness), samples of which will be sent on application.

The Trays which contain the wooden blocks can be made of either wood or cast iron, the latter being, of course, superior. In either case they are in themselves complete, and only require wood or iron stringers to make a finished staircase. If necessary they can be constructed with strong lugs to build into wall, and fix like ordinary stone steps, only being less than one quarter the weight. In this case the balusters are fixed in sockets cast on the outer edge of trays. Particulars to be obtained from the Patentee, at the Works,

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# The Architect.

## THE NEW ADMIRALTY AND WAR OFFICES COMPETITION.



THE final award in this great competition has now been made public, and concludes with an unanimous recommendation that, subject to the approval of Parliament, Messrs. LEEMING & LEEMING, of Halifax, be employed as architects of the new building for the above-named offices, they being considered to have produced the best design. We are quite sure that not only will our readers heartily congratulate these architects on their well-earned success, but that all of them who belong to the profession of architecture

will also congratulate themselves that in this instance, so far as it lay in the power of the judges to secure it by their recommendation, the best men are to win not mere distinction or a small money premium, but the actual prize which is the real object of a competitor's ambition. It was not so in the great public competition for Government offices which resulted in Sir GILBERT SCOTT'S employment to build the Colonial Office; and it cannot have been said to have been so in the Law Courts competition; nor, indeed, are the successful competitors in the present case safe from the many chances and changes which beset all public works; but still we repeat the judges have done for them all that it lay in their power to do, by selecting without any qualification one design for adoption, and, by recommending with equal distinctness that the authors of that design be employed as architects.

We confess to some gratification at the position occupied, and, so far as we remember, occupied for the first time, by the professional men who took part in the adjudication. They were not assessors, or advisers, or paid experts, but acted and signed the report as judges, just on the same footing as the First Commissioner of Works himself. Their services were entirely honorary; that is to say, they will receive no professional fee, but they have the reward, which to such men is not a small one, that in their persons the profession with which they are identified has been treated with due respect; nor should it be passed over as an additional recognition that members of the two architectural societies are to share with Members of Parliament the privilege of private view during the last days of the present week. After this week, the not unnatural wish which has been repeatedly expressed that the designs should be publicly seen, will be gratified by their exhibition for a month.

Three designs are named in the report as having recommended themselves to the special notice of the judges. That by Messrs. LEEMING, that by Messrs. VERITY & HUNT, and that by Messrs. ASTON WEBB & INGRESS BELL. A short inspection of these designs, and a comparison of them with the six others not placed so highly, will soon show that the same thing has happened here which occurred in the Law Courts competition. The best plan was produced on that occasion by EDWARD BARRY, whose treatment of his design was not good; and the best elevation (or more properly the best liked, for the best was undoubtedly contributed by BURGESS) was that by STREET. The judges, it will be recollected, advised a partnership between the two, and it was only when Government perhaps wisely declined to hear of anything of the sort, and referred the matter back to them, that their choice fell definitely on STREET. The best plan in this competition will be found to be that of Messrs. VERITY & HUNT, and had their architectural treatment been more happy, there can be no doubt that they would have carried off the prize. The best exterior elevations, and, for the matter of that, interior elevations and sections, are those in the beautiful design of Messrs. WEBB & BELL; but the plan, though possessing some striking points was found defective, not to mention that the very great height to which their buildings are carried may in all probability have told against them. The judges have fallen back upon a design which, though extremely well planned, does not quite equal the best plan, and though full of architectural

merit is distinctly below the best in those indications of originality, power, and effectiveness which display architectural genius. Nor is it easy to see how they could have avoided coming to the conclusion which they have actually reached under the circumstances.

The site may be described as a large rectangle, the longest dimension of which runs north and south. A corner is parsimoniously cut out of this site at the north-east angle, so that the expense of buying BIDDULPH'S bank might be avoided, and a larger portion, rectangular in shape, is also cut out of its south-west corner, with the more praiseworthy object of not encroaching on the Horse Guards Parade. Messrs. LEEMING, in dealing with this irregular block, have made their main internal quadrangle oblong, its axis running east and west, and have provided no fewer than nine smaller internal open courts. They are enabled to light their corridors and staircases, which are designed with a liberal spaciousness, from these courts, and all the rooms of their building are lighted from the exterior or from the great central quadrangle. This management, coupled with good direct lines of communication, well-shaped rooms and well-disposed approaches, marks the plan out as a thoroughly studied one. The difficulty of providing the accommodation required in the way in which it had to be arranged is said by everyone who attempted it to have been immense; and as this design appears to provide what was required on a less number of floors than some of the others, and apparently without any departure from the regular system on which its lines are laid down, it is manifest that the most careful and painstaking study must have been unstintingly bestowed upon it.

The elevation towards Whitehall is the one which will be most seen, and which should probably be considered the principal one. To suit the exigencies of the plan the principal entrance cuts it quite unsymmetrically, and the difficulty has been dealt with by dividing this point into two portions. The northern part—that nearest Charing Cross—is marked off by two pavilions or low towers, having a considerable length of front between them. The more southerly of these towers forms the main public entrance, and it is in a line with the axis of the principal internal quadrangle. South of this portion of the front, and with the same general ordinance, comes a distinct symmetrical composition divided into three portions by two projecting bays, and terminating near the Horse Guards by a well designed tower, the principal one of the whole building. This elevation, it is proposed, shall rise from the edge of the pavement, with no setting back or even partial recessing, to a height of about 90 feet, surely too high even for the width of Whitehall, although a fairly wide thoroughfare. The front has four storeys, and a plainly rusticated basement. The ground storey is richly rusticated, and has square-headed windows, occupying arched openings with projecting piers between them. The first and second floors are united by a Corinthian order of columns standing on the piers just referred to. The openings differ to some extent on the two floors in this elevation, though hardly enough, and on the north side they are almost exactly alike. Above the entablature of the order comes an attic with square-headed openings and roofs of tolerable steepness, though not conspicuous enough. This arrangement of storeys, and the same general treatment of them, runs round the building, and with modifications is repeated in the quadrangle.

The elevation towards the Green Park is symmetrical, accentuated by two massive towers at the ends, with domical roofs, and happily broken up by four projecting bays, each carried up and crowned with an ornamental roof, so as to break the skyline. A similar treatment is employed on the south front, the one looking over the Horse Guards Parade, while the north front, more broken up by the disposition of the plan than the others, is rather less ornate.

The draughtsmanship, with the exception of the perspective view, is of the very highest degree of excellence; the human figure, whenever introduced in groups of sculpture or statues, is drawn with exquisite skill and taste; and all the ornamental details are equally well represented. We are far from considering that the design is faultless, and in such important matters as the position of the towers and the contrast of the masses of the building, we believe that further study may enable the architects to introduce improvements of importance; but we do not desire to seem ungracious or fault-finding at a moment when the difficulties of a most complicated problem have been successfully solved by the fortunate winners of this competition.



Messrs. VERITY & HUNT have grouped their buildings round a quadrangle that is nearly square, with one entrance from Whitehall and a second on the north from Spring Gardens. Nothing can exceed the simple straightforwardness of the arrangement, and the quadrangle is of an excellent shape. As in the prize design, numerous smaller courts admit light to the windows and staircases. The buildings show five storeys of square-headed openings, and depend on fenestration without an order for their architectural character. The style is a correct but rather heavy version of Renaissance, and the design would be extremely improved by the addition of high roofs; but it is far less happy in treatment than the one placed first, though, as has been said, masterly in plan.

The design of Messrs. ASTON WEBB & INGRESS BELL has a central courtyard of a cruciform shape, and a large amount of well-lighted wall surface has been obtained in this courtyard by their peculiar arrangement. Much of the lighting of corridors, &c., appears to us defective, and there can be little doubt that a critical examination of the plan by the judges has revealed other imperfections, for the artistic merits of this design are such that it must have been with reluctance that they gave it up. The style is French Renaissance of a rather early type, with high-pitched roofs. The buildings are lofty, showing six storeys as against Messrs. LEEMINGS' four; but, with excellent judgment, the principal part of the Whitehall front is recessed back some 60 feet, so that the full height would be well shown. Fenestration is chiefly depended upon, and arcades are to some extent introduced, but the happy distribution of the masses, the skill with which the skyline is broken, and the success with which towers are planted just where they tell best, are of the highest order of merit. The drawings are very artistically worked out, and a very careful internal perspective full of accurate and uncompromising draughtsmanship vies with a clever picturesque sketch of the skyline of the building, as seen from the distance. There will be a good deal of regret that the authors of this charming design are not to have the honour of enriching the architecture of this part of London by carrying it into execution.

A short mention of the remaining designs is all that we can attempt. That by Messrs. GLOVER & SALTER has a main quadrangle running north and south, and not very many smaller courts. The treatment is Gothic, and there is a large detail drawing, which shows much of the influence of WILLIAM BURGESS. An alternative drawing of one of the fronts, translated into Renaissance, is appended, and, we think, is even more successful than the Gothic treatment. No other competitor has attempted the Pointed style.

Messrs. HALL & POWELL have made the axis of their quadrangle east and west. This design is of fenestrated Renaissance, sober in character. Part of the Whitehall front is recessed. Their drawings are distinguished by cleverly-designed groups of sculpture in pediments and on pedestals, and excellently drawn.

Messrs. MAXWELL & TUKE have a great quadrangle, the axis of which is placed east and west, and two smaller ones parallel to it, a very natural arrangement of plan, and apparently well worked out. They also depend on fenestration, but the proportions of many of the features in their design seem to want greater height. Mr. PORTER, the only architect who competes alone, provides a large quadrangle placed north and south, and secures an open space next Whitehall by setting back his building. The treatment is hardly equal to the plan, especially as regards the skyline. The use of an order to each storey, somewhat in the manner of VIGNOLA, is more French than English in feeling. Messrs. SPALDING & AULD have provided one large quadrangle, of which the main length is east and west, and a smaller one parallel to Whitehall. The architectural treatment of their design is Palladian. Messrs. STARK & LINDSAY send what seems a carefully studied plan with a north and south quadrangle. The style adopted by them may be called Venetian Renaissance, and the design is rather rich. The Whitehall front is broken, and in that respect resembles to some extent the prize design.

We have no doubt this collection of plans will be largely visited during the time it is open, and though it is only in our power to congratulate the authors of one on complete success, we can cordially recognise that each competitor has gallantly and worthily striven for the prize. It is no small honour to have won a place in such a competition as this by the excellence of sketch designs. How elaborate and com-

plete even those sketches were, can be judged of by the visitor, as the preliminary drawings of the nine selected competitors are hung side by side with the worked-out plans in the room in Spring Gardens where the collection is to be seen.

### THE INFLUENCE OF ART ON HEALTH.

PLAIN people—who are right in the main, although not always—have a notion that health is a simple sort of goddess, eating and drinking wholesome food, wearing good clothing, breathing fresh air, taking as much exercise as may be convenient, and avoiding draughts. In this age of exhibitions, certain ingenious persons have conceived the idea, and therefore, have very well carried it out, of developing the *cultus* of health at South Kensington, on what is certainly a much broader basis, and in some degree, indeed, a considerably ornamental one, extending sufficiently far all around the subject of devotion as to embrace such paraphernalia as the hatching of salmon fry, and the performance of Chinese music. Architecture, as all the world must know, could not have been excluded from the programme, and distinguished designers of the houses we live in have discoursed, therefore, on the mysteries, not only of drains and ventilators, but of arsenical wall papering, and the smoking of chimneys. Amongst the rest it has been hinted that even what the plainest of our plain people would call the looks of things may be taken to have some influence upon bodily well being. Can this be so?

At any rate, the question of the effect of artistic influences upon our bodily health is one that is not to be put off with a deferential but incredulous smile. Not only are we studying more carefully, and understanding more clearly, the intricate elements of human organisation, but we are becoming every day more keenly susceptible to the thousand-and-one agencies which affect in particular what we call our nervous system. The more we discover about the delicate piece of mechanism which we call a man or woman, the more freely at the same time are we getting into the way of putting it on its mettle. What with morning, mid-day, and evening newspapers, the continual exercise of penny posts, electric telegraphs, telephones, uncanny instruments that spin out of themselves long ribbons of printed gossip from all over the world in quiet entrance halls, and a hundred other demoniacal incentives to fidgets, a tithe of which would have driven our respectable grandfathers out of their seven senses, the wonder seems to be how we survive for any length of time the unrelenting assaults upon our nervous integrity. Well, all that need be said is that mechanism so artificially worried ought to be in some artificial way from time to time pacified, soothed, cooled, or otherwise restored to its normal quiescence, if it is really as a rule to withstand the strain. Not to speak of anything else, may we not at once affirm that, amongst the sedative and curative agencies thus coming to be so much in request, if certain classes of Englishmen, Americans, and others, are to keep their hair growing on their heads and their heads standing on their shoulders, the influences of art offer themselves with all seriousness as important promoters of private and public health.

It was observed at one of the recent meetings at South Kensington that colour, for one thing of this sort, has a direct influence upon the nervous system; and perhaps this is a very fair example of the effect of art in general—or ornamental art at any rate—upon what we are pleased to call the mind; for, manifestly enough, it is colouring harmonious or melodious that must be referred to, as against colouring inharmonious or unmelodious. This phraseology, indeed, suggests at once an interesting analogy that surely may be said to exist between colour-art and music. Perhaps it is near enough to the truth of yet mysterious matters if we say in very familiar terms that music operates by producing a certain vibration (for want of a better word) in the nervous system, the harmony and no less the melody of its movements being identifiable with some concurrence in this vibration, and the want of such concurrence being discernible as discord or dissonance. So also, no doubt, it is some other and probably more delicate vibration of the same nervous organism by which the pulsations of light in the universal ether, as in the former case the pulsations of sound in the atmospheric air, that produce the phenomena of consciousness which are spoken of as the effects of colour. If so, this follows: just as we well know that the difference between good music and bad



may be, to a highly-nervous temperament, the difference between delight and despair, so also the difference between colour-melody or colour-harmony and colour-horror may be, to a like highly strung sensitiveness, the difference between infinite pleasure and insufferable pain.

To carry this argument a little further is enough, and we are led to conclude that, in as far as abstract pleasure and pain are to be identified with abstract health and disease, the arts of the beautiful must connect themselves very directly with the health of man. That our mental pace is increasing rapidly in these days will be admitted without argument, and the time may come, for instance, when the nightmare produced by a dreadfully bad song shall drive an æsthetic enthusiast to suicide. It need not be supposed that there is any exaggeration here; and then we say that, as with the song, so with some "arrangement" in sky blue and scarlet, and so also, each in its degree, with the design of a wall-paper or a carpet, the modelling of a fictile ornament, or the cut of a dress. Art is art one and indivisible, and its influence in one thing is its influence in everything.

The extraordinary manifestations of unusual sentiment and emotion which have for some years back been regarded with so much enthusiasm by æsthetic admirers, and with so much astonishment by the more numerous classes of more composed enjoyers of the graces of the arts, are one of the peculiar mental phenomena of our England. It is idle to treat them with a laugh; that is not any sort of criticism. Whatever principles may be at the root of the development, principles there must be, and, much as some of us may be inclined to doubt the fact, such principles are worthy of being understood, if not worthy of being acted upon. Not only so, but they are entitled to rank as historical and indeed philosophical principles, the cause of whose coming to the fore may long remain undiscovered and undiscoverable, but whose function is nevertheless determined, if we could see as much, by necessity, and not merely by justifiable eccentricities. Perhaps it may help us to look in the right direction for understanding if we take our stand upon the question of the mental health of the people, in whole or in part. As instinct, according to our common formula, leads an earnest and serious party amongst us to seek relief somewhere from commonplace devices of which we have almost all learnt more or less to lament the ascendancy, this is quite enough to excuse both excess and error, so long as human nature remains what it is. The public are in search of artistic health, and must do as they can to find it.

This health may no doubt be found in two very different directions. In one we find repose, in the other excitement. Repose may of course be sleep, and excitement may be agitation; but even this distinction does not help us much, for repose may be all the worse for the patient and agitation all the better, and perhaps it is useless to inquire which is at the moment the panacea for the public ills. We cannot even speak of a *via media*; and perhaps the only reflection that is really worth anything is that nature may safely be let have its own way. In other words we may leave the principles of development which govern all things to be originated by their unknown causes and to produce their unknown effects.

## WESTMINSTER HALL.

(Continued from page 49.)

WITH regard to the towers flanking the north end of the hall, Mr. PEARSON remarks:—

The earliest record of towers at the north end is in a plan in the Crace collection at the British Museum, by Norden, date 1593, but there is no sufficient suggestion of their form to gather any clue as to what that originally was, and late drawings show them substantially as at present, but without battlements. In Hollar's print, on the other hand (1647), battlements are shown.

The alteration of these towers, therefore, cannot be based upon any reference to history or past record. But it is almost demanded by the extreme ungainliness of the existing front. This ungainliness is to a large extent due to the contiguity of Sir Charles Barry's buildings, the roof of which overtops the eastern tower, and has to be stopped in the most unfinished manner. It is said that Sir Charles Barry fully recognised this, and proposed in consequence to raise the entire hall floor and roof about 10 feet, and thus give it proper importance.

No part of the existing stonework which cases the front is earlier than 1820. The battlements are modern, and the large niches in front are conjectural restorations of what existed before.

It is certainly hard to believe, also, that the present windows are copied from anything of Richard II.'s time.

The whole front in fact has an air of spuriousness. I propose therefore to alter the windows and raise the towers one stage, which, to preserve a domestic character, will include two floors, and I have endeavoured to redesign this so as to harmonise Sir Charles Barry's elaborate architecture with the severer work of the hall. By thus remodelling them, I hope to render them worthy of their position and importance in the group in which they now play so insignificant and discordant a part.

By this reasoning, Mr. PEARSON's tender conscience, and fears of the reproaches of his predecessors hereafter, are laid to rest; and he has at last allowed himself to express his own feelings; still always with due regard to those of RICHARD II. on the one hand, and Sir CHARLES BARRY on the other.

We, however, feel compelled to look on the matter from the points of view of the present and the future, and not of the past, and have again to ask, *Cui bono?*

The one prominent characteristic of the hall is the simple majesty of its form and proportions as a hall, and this is conveyed externally by the prominence and scale of its gables, particularly from the north end, and this would be the only means were its flank to be hidden again behind a cloister.

The towers, by whomsoever they were built or recased, have been kept subordinate, and rightly so, for this very purpose; and to raise them considerably would destroy the prominence of the north gable and the character of a hall. The composition would then assume the appearance of the west end of some ecclesiastical building, and as such would be dwarfed by its far more grandiose neighbours. The towers could never assert themselves as towers, in close contiguity to the Clock Tower and others of the Houses, the Abbey, and St. Margaret's. With extreme reluctance, therefore, we are compelled again to dissent from Mr. PEARSON's proposals, for though we admit that the end of Sir CHARLES BARRY's building, rising somewhat higher than the adjacent north-eastern tower, is unfortunate, we feel convinced that the remedy proposed would be worse than the disease sought to be cured.\* If the details be "spurious" they are not obtrusively obnoxious, though doubtless some of the alterations in the fenestration proposed by Mr. PEARSON might prove desirable improvements.† "Old drawings," Mr. PEARSON says, "agree in showing the hall wall battlemented, and I have, therefore, unhesitatingly adopted this treatment;" and, again, "the dormers in the roof being modern and interfering much with the external and internal effect, I propose to remove." That is to say, that the missing features of the old work are to be replaced according to the most careful but still somewhat conjectural method of restoration, and any modern work removed. This is no doubt an excellent canon to follow as a rule, but we have shown what would be the result if carried out to the extent of reproducing buildings for which the use has passed away, and which never could have been ornamental. The side of the hall certainly lacks height, dignity, and richness under the present circumstances, when it has been brought so much more into prominence than was contemplated at the time of its erection. The parapet is gone, and Mr. PEARSON even cannot find out what it was; why, if it need to be rebuilt, as it does, should it be done as meanly as some old drawing indicates it probably was? Here, where a grand feature is wanted to give additional dignity to the hall without altering its general character, a compromise between the implied wishes of RICHARD and Sir CHARLES BARRY might be arrived at by a richer parapet, and covering the roof with lead; the dormers, being found to injure the internal effect of the hall roof, must, it seems, be dispensed with.

We sincerely wish we could have felt justified in supporting Mr. PEARSON's designs and proposals, for though we have come to different conclusions from himself from the data he has so carefully collected, we fully recognise the ability shown by his report and the accompanying drawings. We can thoroughly recommend them to the study of our readers for their intrinsic interest, and they should be preserved as a most full and complete record of the numerous vicissitudes which this remarkable building has undergone. At the same time,

\* Sir Charles Barry proposed to raise the hall bodily some 10 feet, and carried out the wing abutting upon it in a line with the rest of his façade with this view; and consequently, at its junction with the north-east tower, the former rises just 10 feet above the latter, but in rear of it.

† In some cases they would not. The large end window of the hall would be positively injured by the addition of the florid crocketed label proposed to be added.



having recently examined the ruins westward of the hall with some care, we are bound to say that we think Mr. PEARSON has misread some very important features, and in particular those upon which he has built up his theory that the original cloister was of two storeys. Upon one buttress there is the return of a parapet at the top with numerous small details, which, together with the course of moulding of buttress into which it is housed, is obviously a later interpolation, and probably part of some isolated small additional structure built for some special purpose there. We note that Mr. PEARSON does not in his proposed parapet restore its details nor even replace it in the same position or at the same level. Where then is its archaeological value? That it has not architectural value we are convinced.

We shall in conclusion make a short abstract of the history of the hall, as elucidated by Mr. PEARSON's admirable and voluminous researches.

EDWARD THE CONFESSOR founded, and WILLIAM THE CONQUEROR enlarged, the Palace of Westminster, but Westminster Hall was originally erected by WILLIAM II. (RUFUS), in the year 1097. What this first hall was the late removal of the Law Courts has rendered it possible to gain some definite idea. A continuous arcade, "after the manner of a triforium," was carried round the hall in the original design, but at some later date, during the time of the Normans, this arcade was interrupted at irregular intervals by a series of large window openings. In this alteration previously existing work, as far as it would go, was re-used in new positions, and small shafts, bases and caps displaced from the continuous arcade were replaced in two tiers to gain height for the taller windows, and where old work failed for the purpose, as for inner archivolt and external carved caps, that which was added betrays a later date. It had doorways at the north and south ends of the west wall, and three in the north end wall. There is no evidence to show how this Norman hall was roofed or lighted before the intrusion of the later windows described. Other repairs and alterations were probably effected, possibly by THOMAS A BECKET in the reign of HENRY II., and again others in that of RICHARD I. Then, in the period of that great patron of architecture and the fine arts, HENRY III., extensive works of construction and decoration were undertaken, but in the reign of EDWARD III. a great fire occurred, reaching as far as the Abbey, and no doubt extensive damage was done to the miscellaneous buildings, whatever they were, westward of the hall; and the fact recorded, that Parliament had to adjourn after the fire, implies that the great hall itself had somewhat suffered as well. Reference, also, is made to new works in connection with the hall in this reign, but in that of RICHARD II., in order, in all probability, to make it more suitable as a Parliament House, RICHARD entirely transformed it into the shape in which we see it at present. "The walls were raised two feet, and recased, and new windows were inserted. The existing roof was added, a new northern porch and towers and the large buttresses lately uncovered were built. Also 'divers lodgings' on the west side; these were mostly contained by a wall erected parallel to the hall, and connecting together the new great buttresses. The two tiers of wall arches between the Norman buttresses were also erected at this period." Further repairs were made by RICHARD III., and in the reign of HENRY VIII. another great fire occurred, which destroyed a large portion of the palace, which was never rebuilt, and in consequence of this damage, HENRY VIII. removed to Whitehall in 1529. In the time of ELIZABETH large further additions were made to the west side of the hall. In CHARLES II.'s reign Sir CHRISTOPHER WREN made sundry additions, and in that of GEORGE II. WILLIAM KENT built Courts of Common Pleas, and made a doorway on the west side, and also committee rooms along St. Margaret's Lane. Some of ELIZABETH's work was demolished, and St. Margaret's Lane widened in the time of GEORGE III., and in that of GEORGE IV. Sir JOHN SOANE demolished old work and erected his Law Courts. The north end was restored by THOMAS GAYFERE, mason to the Abbey, in the reign of GEORGE IV., and in that of WILLIAM IV. the walls of the great hall by Sir ROBERT SMIRKE, and finally, now in the days of VICTORIA, we have witnessed another great demolition and are awaiting proposed additional building.

Out of this inextricable maze it seems to us a hopeless task to pick out and restore the condition of any precise period, and we would ask in conclusion why now for the first time such a method of proceeding should be adopted?

In every other age but little thought was taken of what had been done before, other than economy and convenience might dictate, and those demands of convenience were sometimes necessarily of a mean character. We have learned to be more reverent to, and careful of, the architecture of the past, but regard to that must needs be subordinated to the wants of the present; and as those wants, from the causes we have explained, are no longer for comparatively paltry appurtenances to the majestic building which has at last become revealed, we are free to consider the problem almost entirely from its æsthetic side, with due but not more than due regard to the archaeological; and we trust that it will be in this spirit that the subject will be approached by the House of Commons. The sides of the hall were never intended for general view, and their remains can only be treated as curiosities. If they are to be religiously preserved as such, it must be within a court, formed possibly by building what we understand is much needed, viz. a range of committee rooms to the west of the hall.

We should much regret the necessity for this upon the æsthetic grounds we have given, but doubtless even such must give way, if need be, to practical requirements; and Sir CHARLES BARRY certainly did intend such a range to be built. If the curiosities of these ruins need not be preserved otherwise than in such a record of them as Mr. PEARSON has prepared, supplemented we would propose by the aid of photography, then let the side of the hall now exposed be dealt with as architecturally best. As to this point we can only suggest that the consensus of opinion is that Mr. PEARSON has not yet grasped this problem. His present drawings should therefore be looked upon as preliminary ones, submitted upon approval; and we trust he may yet be commissioned to revise them, and ultimately allowed to carry out perhaps even a greater work, but at any rate one which will command general assent, and be worthy of his high and deserved reputation.

## ARCHITECTS' CONFERENCE AT THE HEALTH EXHIBITION.

THE closing meeting of the Conference took place on Saturday, the 12th ult., under the presidency of the Right Hon. A. J. B. Beresford-Hope, M.P.

Mr. BERESFORD-HOPE said he conceived it a great honour to take the chair at the meeting that day, an honour consequent on one which he should always look back on as a very great honour and success of his life, namely, the having formerly filled the chair of the Institute of Architects, and to this as one of their past officers he owed the honour of being put in this distinguished position that day. It was a right and a happy idea of the Institute to come forward and claim its own share in the Health Exhibition, for what could be the meaning of architecture if it were not the science of contributing to health, happiness, and longevity in the most permanent of all circumstances of a man's life, namely, his house? Clothes got shabby and food was consumed, but a man's house ought to be part of a man, of his family, and it might be part of the inheritance of his family; therefore it was for us architects to make our houses not merely beautiful and luxurious, but healthful; and in proportion as sanitary science became more and more exact, less and less experimental, more precise and certain, so did the responsibility, and it was a very heavy moral responsibility, rest more and more on us to be, with physicians, the ministers of health. In this exhibition there was one feature which he was sure like all of them he had very much enjoyed, though he had been still more puzzled by it—he meant Old London. The exhibition was meant to be an apostle preaching health, and they produced that Old London with all its exquisite picturesqueness as a proof of how delightful and how beautiful an unsanitary city could be, and when he went through its frowning gateway and saw the beautiful gabled houses exquisitely carved, that charming Mediæval row, its streets widening and opening out, what could all this mean but to show the humbug of health and the beauty of insanitation? He thought something more than this was wanted. Mr. Birch ought to have put himself in communication with some one in Bond Street to produce some such smells as the Mediæval town would have yielded. Instead of the smooth, flat roadway, there should have been, not a trout stream, but a stream of deep, chocolate-brown fluid as was usually found in the streets of our Mediæval cities; and instead of that smooth, hard pathway, there should have been that broken-up composition of many substances on which the people of those days had to tramp? As it was its beauty was evident, but its insanitation remained to be guessed. He had been exceedingly struck by a drawing of Mr. Brewer's, one which was exceedingly beautiful and exceedingly



sad. It represented a Mediaeval cathedral, with houses clustered round about it, but no sign of human life. It was a representation of a city desolated by the plague, a deserted city about the year 1508. In the middle of it ran a sluggish stream, with some broken steps down which the maidens went to fetch the drinking water. A little further on the stream lost itself under a low-browed archway, for it was the drain and common sewer of the city. It was a history in which one read of the sufferings which attended the long-continued plague by which the city was desolated and rendered empty. If those of their friends who were engaged in the promotion of health thought it was their only or chief duty to build sanitary houses, they forgot or overlooked half their duty. It was quite as important to carry health into existing buildings as to erect healthy buildings. It was not merely the misbegotten productions of the jerry builder that they had to put right, but some of the most stately and luxurious homes in the land. There were no more treacherous buildings than those of the last century, when mechanical contrivances had advanced so much, while chemistry and sanitation had not. Fifty years ago there was a house in the West End of London which was overhauled totally regardless of expense by its owner, a man of enlightenment according to the views of those days, a man extremely munificent and imbued with all the notions of high life in London as understood in those days. Among other things provided in the house was a service of hot water to all the chambers. In a few years the house changed hands, and his successor did not feel called upon to carry on this expensive and elaborate system without an adequate return; so years went by, and all about it was forgotten. By-and-by, strange smells were perceived, and people felt strangely depressed in some of the rooms; and on an investigation of the house being made this disused hot-water service was discovered, and found to be a system for diffusing sewer-gas fresh and rich from the mains into the house. The hot-water service was laid, no doubt, by one of the first engineers of the day, but the simple fact that gas was gas, and that gas did rise, never occurred to anyone. Whenever persons bought or hired or inherited a house, let them first of all things look out for the lost and forgotten and hidden drains and cesspools. He spoke from experience within a limited area, but with so wide an experience within that limited area that he could say that the number of these was enormous, and the mischief they were doing incalculable. If search for a few of these forgotten things were set on foot, he believed the death-rate in the country would be notably diminished.

Mr. G. Aitchison, A.R.A., then read a paper on "The Sanitary Aspect of Internal Fittings and Decoration."

Mr. W. White, F.S.A., followed with a paper on "The Hygienic Value of Colour."

Mr. Cutler read a paper supplementing the two previous papers, and agreeing with them.

Professor KERR, on being called on to speak, said he was quite unprepared to discuss the subjects which had been so well treated by his friends Mr. Aitchison and Mr. White. Mr. Aitchison advocated the avoidance of dust and Mr. White advocated the introduction of colour, and it seemed well worthy the attention not only of architects but of those in command of architects—viz., the public—to consider what architects could practically do in the prevention of dust and the introduction of colour. Architects, he feared, could do little to keep dust out of the house, but once it had got in they might do something. The use of carpets, curtains, and upholstery was—within reason, and without going too far in this direction—to be discouraged, and we ought to consider whether we were not using too much upholstery in our rooms. The architect could do something in respect of decoration and projections, but not much as regarded polished surfaces, for the public generally did not like polished surfaces; but in his opinion, as far as they could be used, they should be used. Clients could not be expected to hold with all the suggestions of science. Over and above all, so much depended on the cleanliness of the housemaid. Certain cottages were to be seen in the country where everything was dirty, and certain other cottages, inhabited by the same class of people, where everything was clean as could be. Ladies, he thought, must look after this; for, if they would, they could keep the house clean. Professor Kerr concluded with some remarks on Mr. White's paper and the use of colour, and observed that the public were becoming nowadays more alive to a sense of colour.

Mr. EWAN CHRISTIAN said that there were some London streets he never would go through owing to the miserable effect of the horrible colour and aspect of the houses, and yet some people wondered why they felt depressed in them. As regarded the interior of our houses there was little doubt that what Mr. White had said was perfectly true: He himself had ordered one of his rooms to be papered with a crimson-flock paper, and on his return after a short absence he found he could not stop in the room half an hour, and he never went into the room again until the paper had been taken off. Woe betide, he said, anyone who put linoleum over a boarded floor. The floor would rot away in a year or two. The very best floor he ever knew perished in three years' time. Mr. Christian finished by an allusion to the value of flowers, and said that the presence of flowers in a cottage window was generally an

index of the cleanliness of the inmates, and consequently of the interior of the houses.

Mr. ROWE (of Sydney), said he was astonished to find that the upper sashes of the windows of the hotel where he was stopping would not open. He judged from this fact that probably thousands of the London houses were the same. He thought that it should be made compulsory on landlords to rectify such an unsanitary custom.

Mr. H. H. STANNUS said that a practice which obtained in Lancashire and Yorkshire had not been mentioned, not to fasten the floor boards till the house had been plastered. The house was the drier in consequence of the through draft, and there was not the same danger of dry rot. It was a custom which might well be adopted in the South of England. Where carpets were used dust accumulated, and whatever tended to increase the difficulty of taking up carpets to shake them increased the insanitary state of a house. He would always like to see the furniture of rooms fitted with large castors, so that servants might have no excuse or difficulty in getting up the carpets to shake them. When he found that Mr. Aitchison's paper treated of sanitary matters, and Mr. William White's of colour, he was astonished, and thought that matters had rather mixed. Thanks were due to each for entering on a new rôle and giving them the benefit of their counsel. As to the colours mauve and magenta, he hoped some one would appear who would be able to harmonise the two colours. Every fresh addition to the palette had been attended with difficulty, but in the end some one had arisen who had harmonised them.

After observations from Mr. Birch, Sir Joseph Fayrer and Mr. Charles, Mr. Beresford-Hope wound up the discussion, and said that in the house of his father, who was one of the first pioneers in art decoration, all the floors were of parquet or cement mosaic, which Mr. Aitchison had not referred to. This, which was an inheritance from the Romans, was still preserved by the Italians, and it was impervious to wet and afforded no harbour for dust. Of late there had been an enormous artistic development of tiles, and in this, he thought, we might have a beautiful, artistic and æsthetic architecture of the future.

Mr. T. H. Watson then read a paper on "The Collection, Storage, Management, and Distribution of Water for Domestic Purposes within the House."

This was followed by a short discussion, and the Conference broke up.

## THE SCOTTISH ART UNION.

THE annual meeting of the subscribers to the Royal Association for the Promotion of Fine Arts in Scotland, was held on Saturday last, in Edinburgh, under the presidency of Lord M'Laren, when the following report was read:—It is very gratifying to the committee to be able to report on this the fiftieth anniversary of the Association, that 947 members have been enrolled during the year just ended in excess of the previous year, and that the total fund subscribed amounts to 3,539*l.* 3*s.* The Association—the first established in the United Kingdom for similar purposes—was instituted in 1833, with a view to advance the cause of art in Scotland by affording encouragement to its professors. During the half century which has elapsed since the Association was instituted, its objects have been advocated and promoted by many illustrious men, and have met with a large amount of encouragement and support from numerous and intelligent classes of the community. Besides encouraging and fostering a love for the fine arts in general, the Association has undoubtedly helped to produce throughout the country not only a greater knowledge of art, but also a much greater interest in its progress. For some years prior to 1833, the date of the establishment of the Institution, the whole sales effected at the annual exhibition of the Royal Scottish Academy only averaged about 300*l.*, while paintings to about the value of 100,000*l.*, have since that year been purchased by the Association from the Academy. The manner in which the public has evinced its confidence in the mode in which the affairs of this Association have been carried on is shown by the large sums annually subscribed towards the objects for which the Association was instituted. These sums amount in all to upwards of 235,000*l.*; and have been applied by the various committees of management in the purchase of paintings and sculpture for the members, in the production of engravings and illustrated works for circulation amongst the subscribers, and in the purchase of paintings towards the formation of a national gallery of modern art. In connection with these latter chances a small percentage of the fund annually subscribed is devoted to the acquisition of modern works of art, towards the formation of a national gallery. This is a feature peculiar to this Association, and it must be gratifying to the members that the Association has a permanent record of its operations in the paintings purchased with this fund, which at present contribute to the enrichment of the Scottish National Gallery. The sums expended in the acquisition of these works of art, and in connection therewith amount to nearly 4,000*l.* The sum at present at the credit of the Gallery Fund is about 500*l.* From the recent exhibition of the Royal Scottish Academy your committee have purchased at a cost of



973*l*. twenty-five paintings and fourteen water-colour drawings. In addition to these works of art, there will be included in the distribution about to take place twelve drawings, commissioned from Mr. George Reid, R.S.A., at the cost of 300*l*. for the purpose of being engraved for the present members. The sixteen engravings illustrative of the scenery of the river Tweed, forming this year's presentation work, have now been completed, and the committee desire to record their high appreciation of the beauty of the drawings, and of the admirable manner in which M. Durand has executed the *facsimile* reproductions. The committee also take this opportunity of tendering to Professor Veitch the acknowledgments of the Association for the interesting and valuable introduction he has so kindly written to the volume, and to Dr. Walter Smith for the original sonnets he has furnished for two of the illustrations. As regards the presentation work for the ensuing year 1885, your committee have resolved that it shall consist of a selection of photogravures or engravings of some of the most characteristic and the best known paintings by Sir William Fettes Douglas, President of the Royal Scottish Academy. Further particulars will be announced in the prospectus for the year.

The committee have considered the letter referred to them at last annual meeting, suggesting that in future winners of prizes should be allowed to select their own pictures. The question raised has since the formation of the Association been from time to time brought up; and the committee, after full consideration, have been unable to come to any other conclusion than that arrived at by their predecessors, that the proposed changes would not be desirable in the interests of the Association.

### ARCHITECTURAL SCHOOL, ROYAL ACADEMY.

THE following students have been admitted into the various classes in the Architectural School of the Royal Academy:—

*Upper School*.—R. D. Fell, Frank Fox, F. Simpson, and J. Thomson.

*Lower School*.—S. Hall, A. B. Mitchell, J. E. Newberry, E. H. Sedding, E. H. Selby, and F. W. Troup.

*Probationers*.—P. Anderson, N. W. Allen, R. S. Ayling, W. H. Boney, W. A. Burr, W. L. Buxton, J. J. Cresswell, F. M. Day, L. Dennis, H. P. B. Downing, H. Druery, L. R. Ford, C. Gill, G. Harvey, T. H. Hitchin, W. H. Howie, H. Hutchins, A. R. Jemmett, A. J. Lancaster, W. Leck, H. C. Manning, F. W. Marks, F. Masey, C. L. Meadway, W. Newton, R. O'B. North, W. R. Schultz, A. Steinthall, A. Sykes, A. S. Taylor, J. B. Thorp, F. J. Webb, and T. G. Wetherell.

### WEIMAR.

A CORRESPONDENT of the *Glasgow Herald* gives the following description of a visit to Weimar, the German town which is associated with the names of Goethe, Schiller, Herder and Wieland:—From the station you stroll down an avenue of limes, at the foot of which, just before you enter the town itself, stands the Museum—a sort of entrance hall to Weimar itself, the home of the Muses. Here you are called on figuratively to put your shoes from off your feet. Unlike most museums, there is not *much* to see here, but what there is well worth looking at. Chiefly to be noted are the mural paintings by Preller. They decorate the walls of the upper hall, and represent the story of the Odyssey. A glance at these will be the fittest prelude to the scenes of classic beauty and pathos which the day will disclose. As we pause before the picture in which the wily hero stands in dusky light by the open grave, and marshals up the spirits of the departed, we feel that our own mission is not unlike his. We stand in Weimar beside the graves of the great dead, and we try to summon up their spirits to tell us how best to guide our life. As we leave the Museum, we bend to the left in the direction of the Palace, which rose in 1790-1803 under the eye of Goethe himself. On the way we pass the statue of Herder, who stands over against the church in which he laboured, with his favourite motto inscribed on an open roll in his hand—"Licht, Liebe, Leben." All travellers are familiar with the interiors of palaces. Windsor, Berlin, Versailles have all the same tale—the same endless suites of reception-rooms, where the rich tapestries and pictures are reflected in the bright inlaid floors below. But with all their magnificence and art-treasures, none of these is so truly beautiful and artistic as the little palace at Weimar. Nor with all their battle-pieces and portraits of princes do any of these suggest thoughts of empire so wide as the little salon here, which, with its furnishings precisely as they were in Goethe's time, seems still to retain the echo of his voice as he used to recite his yet unpublished manuscripts to his kindly court critics. To each of the four illustrious poets of Weimar a room is here dedicated, whose walls are set apart for mural paintings of scenes from their works. Egmont we may remark especially, in the Goethe Room—white and glistening as when he threw off his military cloak and stood in the famous scene before Clarchen's dazzled eyes. Or Faust, as he lies at the end of the Second Part, his soul redeemed

at last by that very yearning and struggle after truth from which it is now delivered, and escaping from the clutch of Mephisto the Destroyer to the Heaven where Gretchen already entreates for it at the Throne of Grace.

As we descend the stair of the Palace we ask the attendant the way to the City Library, which was a frequent resort of Goethe and where still linger many memories of him. On inquiring further whether the aged librarian who knew and remembered the poet is still alive, we are told with a smile that he is, and that he "still makes his little jokes." A few steps bring us there. We are met by the old man himself at the door. He is still fresh and active and fragrant of the past. He knows what we have come for, and leads us at once, almost without a word, into the presence of a colossal head of Goethe in gypsum, cast by the sculptor Von David. It startles the visitor at first. The hair stands back from the great forehead as though the poet had just run his fingers through it and it had not settled back yet. Our guide whispers to us that it had startled Goethe himself when he first saw it, and that he exclaimed "Curios!" The expression seems at the first glance stern and even awful, and we remember how often we have heard the Germans call him "proud," but as we look we see that it is only what is greatest in Goethe—his gigantic personality—looking out from among and unifying the qualities we admire most in lesser men. We are next led round an angle of the library, and find ourselves beside the celebrated marble bust of the poet by Von Trippel which the Germans know as the "Apollo Head." Goethe was 40 years old when he sat for this head, and if he was really like that we do not wonder that Heine, as he tells us himself, on his first interview with the poet, "was nearly speaking Greek to him!" Heine changed his mind, told him instead in plain German that "the Weimar plums were very good," and was relieved to find that Goethe smiled. We, too, shall probably see on a closer look that there is more of the German than of the Greek in the best pictures of the poet. It is with the man as with his writings—classic beauty of form is ever breaking down before the broad strength and geniality of his Teutonic genius. Of the bust before us Goethe himself is reported to have said that he could not see any resemblance to himself in it; but he added characteristically that he had no objections to go down to posterity as so handsome a fellow ("ein so hübscher Bursch"). We may rail at the "realism" of our present day English artists, but the faces of our Carlyles and our Darwins will at least be handed down to posterity as they were in the rugged flesh, and not as they come from the chisel of an idealist. Schiller's head (by Von Dannecker) stands facing Goethe's, but it, too, has suffered. Why should the artist have made the forehead to rise like a cliff to suit any phrenological theory of his own? All such misrepresentation is vain. Schiller's head was exhumed with a view to removal to the ducal mausoleum at Weimar, and identified among seven others that were buried beside it by several independent witnesses, and his forehead retreats! Nevertheless the busts in the library are beautiful works of art, and sufficiently express the men. Schiller sat for the sculptor in 1805, the last year of his life, when death was already on his sunken cheek. Our guide pointed to Goethe, and whispered the word "Glück," then, turning to Schiller, he added "Schmerz." He next led us upstairs to show us his most precious treasure, among a number of toys and gimcracks, to the construction of which departed Grand-Dukes had devoted ingenuity which could find no outlet in politics. We shuddered to think of what our own Peers may some day be reduced to. After a little delay, just sufficient to heighten our expectation, a china cup and saucer were produced in their velvet case, on the side of the former of which is painted, in exquisite miniature, a portrait of Goethe, executed by Sebbers in 1826. The poet is said to have sat thirty-four times for the picture, and if we may judge by the vividness of the likeness, which seems as we look at it through a magnifier to live in the porcelain, we may well believe it. The artist has indeed succeeded in "making a little space beautiful." Like Wagner in Faust with his homunculus, he seems to have caught the principle of life itself and enclosed it in this little cup. As we looked at it our guide was restless and nervous. His uneasiness was only explained when he told us of the narrow escape it had recently made as a visitor was peering at the cup like myself through an eye-glass. The glass dropped heavily from his nose, and unless its faithful guardian had swiftly interposed his hand this "holy grail" would have run a sore risk of passing, like its ancient prototype, into limbo. On leaving the library we took an affectionate farewell of the old man, who presented us with a poem he had written himself on the treasures of the library, and warmly invited us to return.

We had been told by the guide-books that the house in which Goethe had lived, and which is at present occupied by the descendants of his family, was closed against visitors, but we now found that though the rooms themselves were usually closed we might by permission of the housekeeper have free access to the garden behind, in which the poet had passed so much of his time. We crossed a yard and through a court underneath the rooms which (and not any of those which are seen from the public street) were occupied by the poet. The little garden was one mass of lilac, laburnum, honeysuckle, and acacia, intersected by footpaths with their high lines of boxwood. Here we were left fortunately alone to drink in at



our leisure the memories that seemed to float on the scented air around us. The windows of the poet's house look out upon the garden, and as we turned away we were free to pluck a leaf from the old creeper that made its way up to the casement of the poet's own chamber, as it had done fifty years ago when the poet died there calling for "more light."

Within a stone's throw from the house of Goethe is that of Schiller, where the room in which he worked, and the plain deal bed (now heaped high with laurel wreaths) in which he died, his pictures, his old piano, his table, his inkbottles, and what not are freely shown to the visitor. The house has been bought by the Government, and placed under the care of an old lady, whose duty it is to keep it fresh and clean, and to remunerate herself by selling photographs of Weimar itself and its celebrities. We had the opportunity a week later of visiting Thomas Carlyle's house in Cheyne Row, Chelsea, and could not help contrasting its cheerless and neglected appearance with what we had just seen in Weimar. Its doors and shutters are faded and closed, its windows dusty and broken. Truly we are a grateful nation! If we no longer stone our prophets we let our children stone their houses. Gladstone, it may be, and his Government care for none of these things, but is there nobody who does?

As you leave Schiller's house a few steps bring you into view of a statue in the centre of a little square which you at once recognise to be the celebrated "Dichterpaar" executed by Reetschel in 1856. Goethe and Schiller stand here larger than life, each with his hand upon the laurel wreath they hold between them. So skilful the artist that we cannot tell which of the two gives the wreath and which takes it. Although Schiller stands with his head thrown back in an erect attitude which we are told was never his in his later years, and although he was several inches taller than Goethe, he yet does not seem in the statue to get the advantage of it. In the rapt expression of his worn features we seem to read the character of his genius. His fervid, exalted spirit seems hardly to belong to this world. In Goethe's broad, firm face, on the other hand, bent slightly downwards with its sympathy and insight, we seem to see the poet of the many-sided world we live in. Schiller found this life a struggle, and left it early; to Goethe the world had shown itself a home, and he "loved it out of gratitude." Even in their dress we seem to see the difference between the student and the courtier. If the frockcoat and ruffled shirt-front of the older poet suggest that Goethe had something in him of the dandy, what does it matter? Plato was a dandy, and why might not Goethe be? And yet that very coat we saw hanging in a glass-case in the library beside Luther's gown and Bible, and were solemnly assured by the librarian that Goethe could not endure to wear it.

#### SIR JOHN STEELL, R.S.A.

A STATUE of Burns by Sir John Steell, which was commissioned by Mr. J. Gordon Crawford, has been placed in the Embankment Gardens, near Cleopatra's Needle. It was unveiled on Saturday by Lord Rosebery. After the thanks of the assembly had been voted to the donor, the following speeches were delivered by Mr. Faed, R.A., and the Lord-Advocate, on the skill shown by the sculptor:—

Mr. Thomas Faed, R.A., said:—My lords, ladies, and gentlemen—It is unfortunate that we have not amongst us this day the sculptor of this beautiful statue, which Lord Rosebery has just unveiled with an eloquence and feeling worthy of himself and of the great subject he has treated, and I am sure it is as great a misfortune to Sir John Steell as it is to us that he is obliged, through illness, to be absent. If I might mention another misfortune, it would be that I have been selected to bring his honoured name before this great assemblage. I cannot deny that there is a certain fitness in the selection, for I have known him for nearly half a century; but there the fitness stops. We painters are silent workers, and, with a few brilliant exceptions, do not cut a great figure on the platform. The career of Sir John Steell has been a long and honourable one. Before his time, with the exception of Sir John Haining, few men of note in statuary appeared north of the Tweed and remained practising that art. We need not wonder that he has long since gained the honourable distinction of being the father of monumental sculpture in Scotland. It has been his good fortune to have had many opportunities of showing his powers both in his native city, Edinburgh, and elsewhere. In Edinburgh alone we have five or six of his noble works. Of these I may mention some of the best known, naming them in the order of execution. The magnificent equestrian statue of the Duke of Wellington in front of the Register Office; the Queen, over the entrance of the Royal Institution; Sir Walter Scott, enshrined beneath the canopy of Kemp's world-famed monument; and the Scottish national memorial of Prince Albert, perhaps the most honourable of all his achievements, on the uncovering of which he was knighted by Her Majesty. New York holds his Burns and his Scott. Yet, my lords, ladies, and gentlemen, I am sure he will feel as proud at seeing his name carved on the pedestal of Scotland's peasant bard—the world's bard, for was ever man more human?—standing, as it does, on the margin of England's mightiest and most historic

river, as of any honour hitherto bestowed. Let us hope that Macaulay's prophetic New Zealander may meet with someone to point out to him Steell's statue of Burns, or at least the place where it stood. I am sure that you will join with me in wishing that the man whose appreciative brain and cunning hand conceived and carved this beautiful statue may have a renewal of health and vigour, and that he may be called to execute a companion to the one we have unveiled this day.

The Lord Advocate said:—In the inability of Sir John Steell to be present, I have been asked on his behalf to acknowledge the graceful and eloquent tribute which was paid to his qualities by Mr. Faed. To all who hail from the north Sir John Steell's name has long been a household word. I doubt whether there is anyone here old enough to recollect the time when he was not in the forefront of our modern sculptors. Somewhere about forty-five years ago he was appointed Her Majesty's Sculptor for Scotland, and during the whole of that time it has been a pleasure to all of us to observe his works. Mr. Faed has recalled that group, or rather that succession of great works, that meet us whenever we take our walks abroad in Edinburgh. If anyone is disposed to walk along that noblest street in the world—Princes' Street of Edinburgh—and if he chooses to begin at the east end, the first object which will rivet his gaze will be that equestrian statue, full of life, and vigour, and spirit, which stands so proudly before the Register Office. We know that at no great distance from the place where we are now assembled the image of the illustrious Duke has recently descended from its lofty pedestal and vanished from view. But so long as artistic taste and the admiration for warlike valour remains, Sir John Steell's statue will ever endure. When we proceed a little further west we find the seated image of Sir Walter Scott looking thoughtfully and gravely down upon us. Then Her Majesty meets us at the Royal Institution; and if we turn northwards into George Street, we find one of our greatest and most respected divines, Dr. Chalmers. It was but a fitting climax to that series of great works that it should be the privilege, as it was the pride, of Her Majesty's sculptor to execute that memorial which adorns Charlotte Square. I dare say to those of us who have the duty of passing a good deal of time in London it must be a deprivation not to find around any great works to which we were accustomed. Hence we must have a feeling that there has been filled to day a great blank in the placing of that magnificent statue in one of the finest promenades of this the proudest capital of the world. I dare say Burns, who never was here himself, may feel rather solitary seated there alone, but Mr. Faed has very well indicated a way in which that drawback of solitude may be removed. I do not see why some other replica of Sir John Steell's work should not be gifted to this great metropolis by some other generous donor—say of Sir Walter Scott. It would be an additional pride to every Scotsman in the metropolis, as well as a benefit and a pleasure to the friends amongst whom we live. I can only say I am sure this will be one of the proudest days of Sir John Steell's long and honoured life, and that he will never forget the tribute that has been paid to him by your presence here to-day.

#### BUILDERS' BENEVOLENT INSTITUTION.

THE thirty-seventh annual meeting of this institution was held at Willis's Rooms on Monday, Mr. George Plucknett, J.P., in the chair. The annual report read by the secretary, Major Brutton, stated that during the past year seven pensioners (six men and one woman) have died, and nine new ones have been elected (seven men and two women), making an addition of four pensioners. Two widows of deceased pensioners have also been admitted to the benefits of the institution. There are now fifty-eight pensioners on the funds of the institution, and the committee earnestly appeal for increased help. They acknowledged that very valuable aid was given by the president for the past year, Mr. Henry G. Smith, and by the gentlemen who superintended the arrangements for the annual dinner and ball. In conclusion, the committee express their satisfaction in announcing that Mr. Stanley George Bird had intimated his willingness to become president for the ensuing year, and that the annual dinner will take place at the Freemasons' Tavern on November 6. The balance-sheet showed the total receipts from all sources to have been 5,266*l.* 2*s.* 9*d.*, while the expenditure was 2,273*l.* 10*s.* 5*d.*, leaving a balance in hand amounting to 2,992*l.* 12*s.* 4*d.* The report and balance-sheet were adopted on the motion of the chairman, seconded by Mr. Bussell. Votes of thanks to the trustees, auditors, and committee having been carried, Mr. Stanley George Bird was, on the motion of the chairman, seconded by Mr. Thomas Stirling, elected president for the ensuing year.

A Museum of Casts is to be founded in Vienna. M. Lützow has been appointed director. A collection of subjects will be obtained from the galleries of the British Museum, the Louvre, the Trocadero, &c. It is intended to make the new museum of a comprehensive character.



## NOTES AND COMMENTS.

ONE of the three great *ateliers* which are connected with the Ecole des Beaux-Arts in Paris, has been directed by M. HÉBERT. In 1839 M. HÉBERT arrived in Rome, having won the Grand Prix in painting, and in course of time he was appointed director of the school in the Villa Medici, in succession to M. ROBERT-FLEURY, who held the office for less than the customary period. It has been arranged that M. HÉBERT is again to undertake the directorship, which has been lately filled by M. CABAT, an artist whose works were rewarded with a second-class medal fifty years ago. It will be necessary to appoint a successor in the Paris *atelier*, and it is understood that the choice lies between M. BONNAT, the portrait painter, and M. BOUGUEREAU. The best known paintings of M. HÉBERT are those which represent scenes in Italian life. He was the first to depart from the conventional prettiness which was sanctioned by such men as EASTLAKE and UNWINS in England. His realism was one of the influences to which the modern school of France owes its existence.

It has been decided by a majority of the Court of Common Council that the suggestion of the Select Committee of the House of Commons on Thames Communication should be adopted. The Committee reported in favour of the construction at Little Tower Hill of a low-level bridge with two openings, each about 100 feet span, and crossed by a pivot swing bridge, and on those lines the Council intend to work. A design is to be obtained by the Bridge House Committee, who have power to seek the assistance of other engineers besides the Corporation officials, and if approved, a Bill will be lodged in November seeking powers to carry out the work. The principal opponents to the scheme are the wharfingers and owners of riverside property between the Tower and London Bridge, who maintain that the bridge will do much towards completing the ruin of London as a port. But prophecies of the kind are the accompaniments of all useful undertakings. The influence of the bridge in enhancing the value of property in the neighbourhood of the approaches appears to have been overlooked in the discussion.

It is proposed to obtain an additional source from which to derive the supply of water from Paris. The site, which has been selected by M. BELGRAND, is on the plateau of Morvan, in Basse Bourgogne. The quantity to be taken may amount to 150,000 cube mètres in twenty hours, for which a rent of seven centimes is to be paid. If a larger quantity is taken, the price for the excess is to be reduced to three centimes. At the present time water is freely used in cleansing and allaying the dust in the streets of Paris, and has been for some months past. The expenditure almost seems to be extravagant in the eyes of an English town councillor. There seems to be no stint of water for fountains, baths, and the like. When the new source becomes available, the Municipal Council of Paris can afford to be even more liberal with water than they are now.

SCOTTISH painters have no reason to complain of modern patronage. According to a statement which was made at the meeting of the Northern Art Union, it appears that in 1828 the sales of pictures from the exhibition of the Royal Scottish Academy did not amount to more than 35 guineas, and as the Dean of Faculty expended 30 guineas, the whole of the remaining purchases amounted to five guineas. It needed no small amount of enthusiasm to follow art as a profession in those days.

A COMMITTEE has been formed, with Sir JOHN LUBBOCK as treasurer, in order to prevent the destruction of valuable monuments of antiquity when found in London and its vicinity, or, when such destruction is inevitable, to secure the execution of proper plans and drawings. The necessity of an organisation for this purpose is just now made evident by discoveries of considerable interest progressing in Bevis Marks. In the course of excavations at the corner of Castle Street, foundations have been disclosed which evidently belonged to a structure of great solidity and strength. A preliminary examination showed the remains to be composed of large fragments of Roman sculpture, taken from some anterior building in the locality, and used as building materials. By the courtesy of the contractors, Messrs. MOWLEM, BURT & Co., some of these pieces

were extracted. These were of the highest interest; but as the works could not be delayed an hour, they would have had to be covered in and again buried, if it had not happened that Mr. PRICE, the secretary of the London and Middlesex Archaeological Society, undertook the risk and cost involved. With the sanction of Colonel HAYWOOD, City Engineer, further excavations were accordingly commenced, from which interesting results have been obtained, and the work will be continued until everything of importance has been removed. In the meanwhile, arrangements will be made for the safe custody of the objects found in one of the public museums. To meet this and future emergencies a fund is being raised to be administered under the supervision of the General Committee by a small executive committee.

THE trustees of the Earl of CRAVEN have decided that during his lordship's minority there are to be no explorations at Woolstone, in Berkshire. This will be a great disappointment to archæologists. The discoveries of Roman remains, which were made without difficulty, were enough to excite the imagination, and it was supposed that a second Silchester was not an improbability. One archæologist says that at a distance of about thirty yards from the Roman Villa, he uncovered another pavement, somewhat mutilated, the tessellæ larger than those previously found, and laid in the well-known key pattern; in the centre and level with the pavement was a stone about a foot square, perforated, which upon being raised was seen to have rested upon two others placed perpendicularly, thus forming a small cyst. From the remains therein found it was evidently the burial-place of a child; it had, however, been previously opened, the perforated stone being broken in two places. In walking through the various fields, fragments of Roman tiles, tessellæ, and pottery are found in large quantities, and the ploughshare turns up the foundations and portions of walls of stone. For nearly a mile in extent these traces of early habitations are to be met with every few yards, giving evidence of a settlement of considerable size. The tessellated Roman pavement recently discovered at Woolstone has been given to the Ashmolean Museum, Oxford, by Lady CRAVEN.

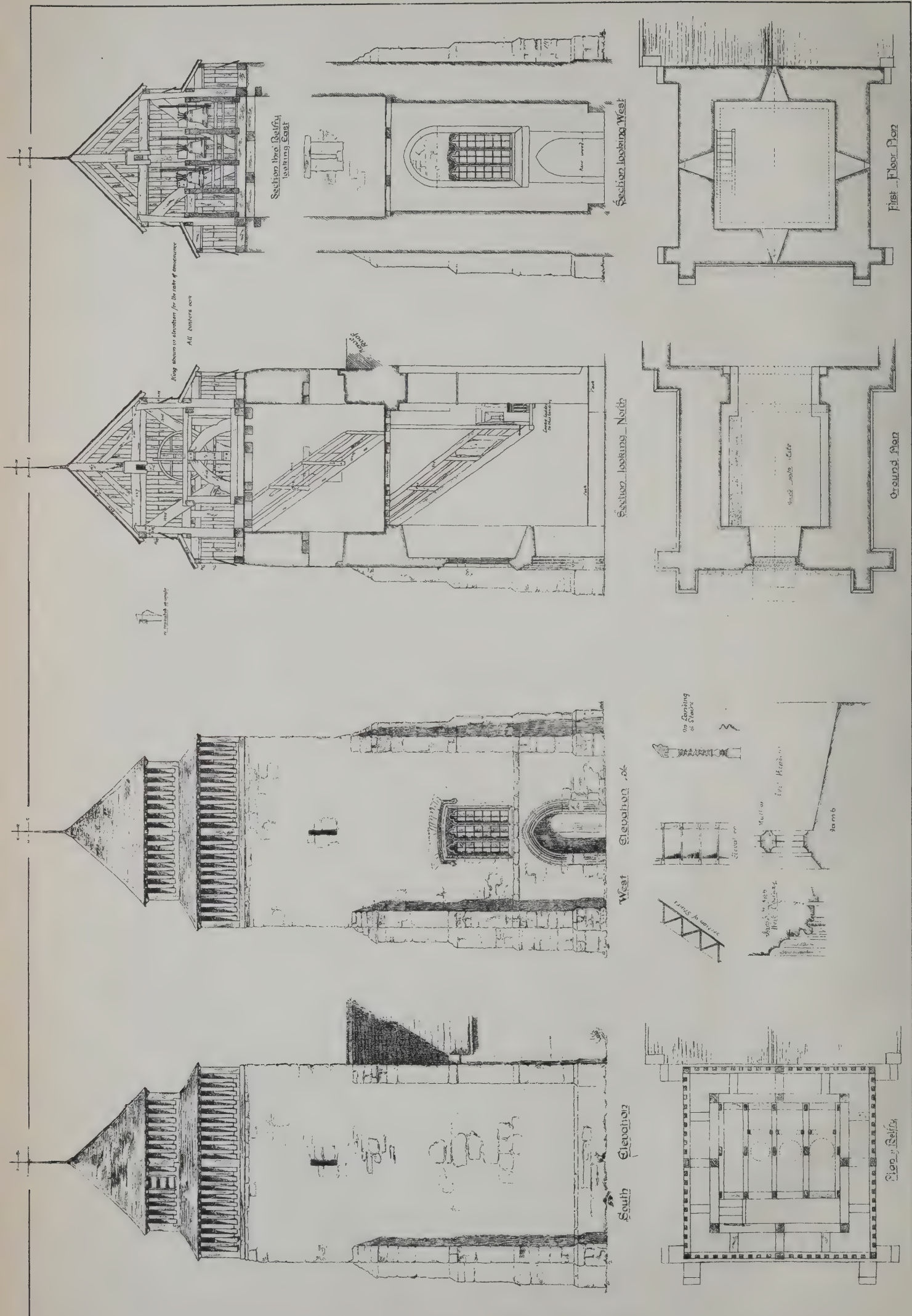
THE risk that is incurred by architects and engineers in dealing with sub-contractors, was exemplified by a case which was heard last week at the Suffolk Assizes. The circumstances were as follows:—A contract had been entered into by Messrs. PEARSON in 1879 for the construction of the Ipswich Sewerage Works, but it did not include penstocks and other ironwork. Afterwards Mr. BRUFF, the engineer, agreed that the contractors were to supply the ironwork. They naturally wished to obtain the articles from the stock of some London house. The engineer recommended that the order should be given instead to a local ironworks owned by Mr. MUMFORD. There was, however, no evidence of any order in writing from Messrs. PEARSON. The prices were settled by Mr. BRUFF, and the invoices for the ironwork supplied from time to time were made out in his name. Mr. BRUFF said that he included the amounts for the ironwork in Messrs. PEARSON'S certificates; but, on the other hand, one of the contractors said that the ironwork was not included in their monthly accounts, and they had nothing to do with the ordering of it. The balance unpaid amounted to 447/. The case was heard before Mr. Justice DENMAN alone, and under the circumstances it is not surprising that his lordship wished for the assistance of a jury. The judge was of opinion that Mr. BRUFF acted as the agent of the contractors—a position which was not to be desired or encouraged. If the invoices were interpreted literally, then Mr. BRUFF was the debtor. Accordingly, after pointing out the unwisdom of the arrangements, judgment was given for the sum claimed. It may be assumed that if the action had been taken against the engineer, judgment must have gone against him.

THE National Association of Master Builders of Great Britain held their 13th half-yearly meeting at the rooms of the Central Association of Master Builders of London, on Tuesday, July 29, Mr. STANLEY G. BIRD, the President, in the chair. The meeting was largely attended by representatives from the provincial and local Associations. After the routine business had been disposed of, several matters affecting the trade were discussed, more particularly the question of quantities. The next meeting will be held at Lincoln.









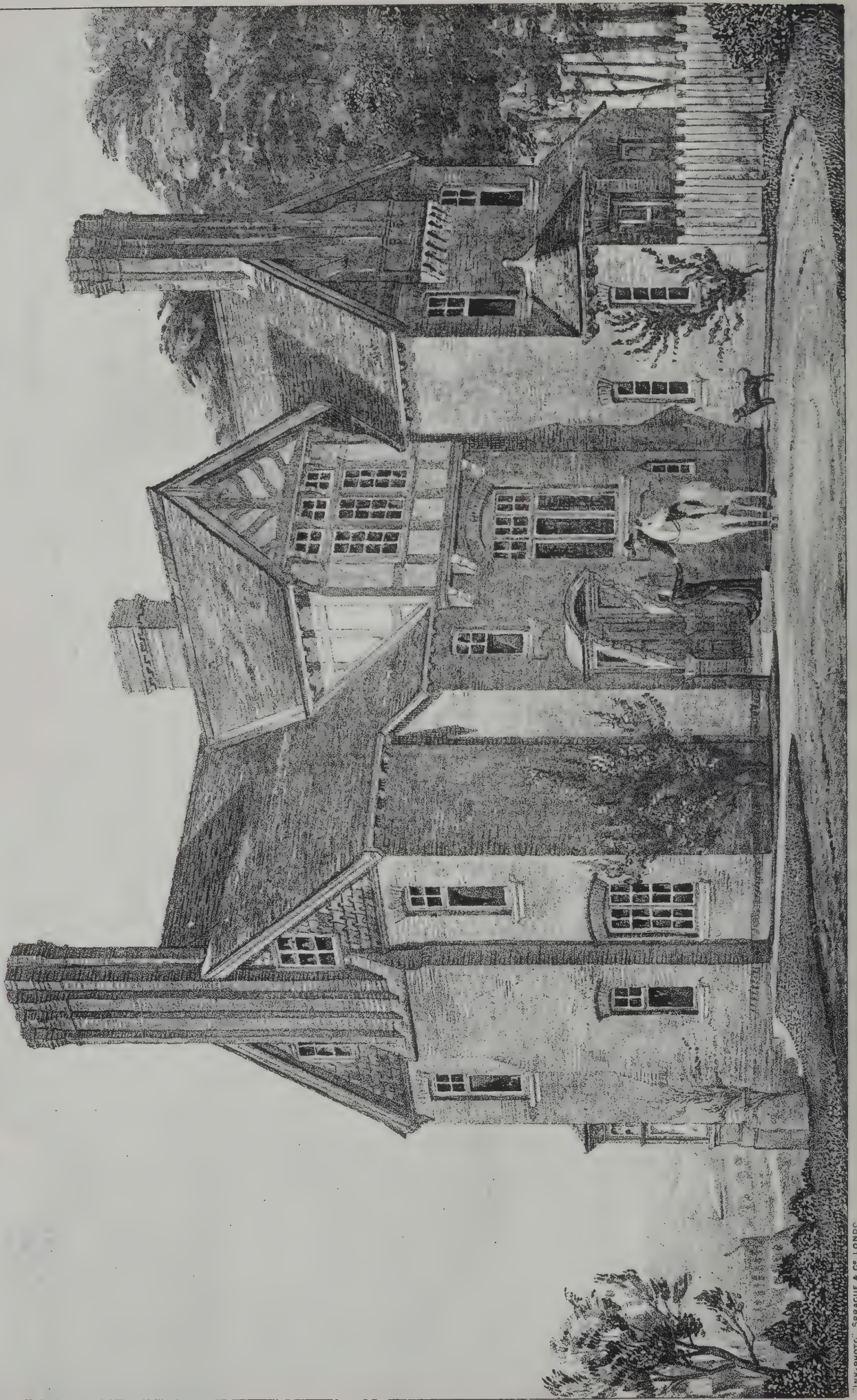
BETTWS CHURCH TOWER, MONTGOMERYSHIRE.

DRAWN BY J. H. BECKETT.









RESIDENCE, VESPER GATE, KIRKSTALL, LEEDS..

WILLIAM H. THORP, A.R.I.B.A., ARCHITECT.

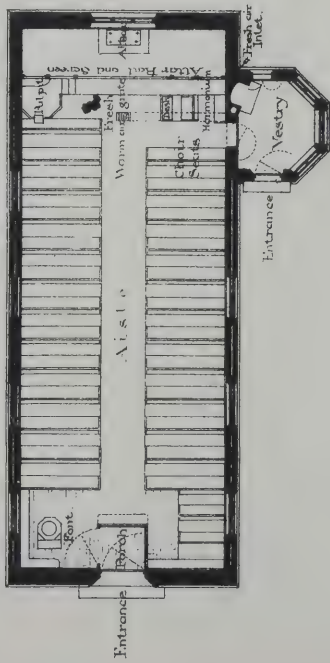






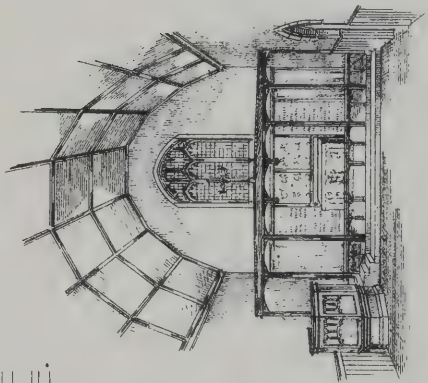
# Design for Small Mission Church.

Accommodation for 150.  
Cost \$400.

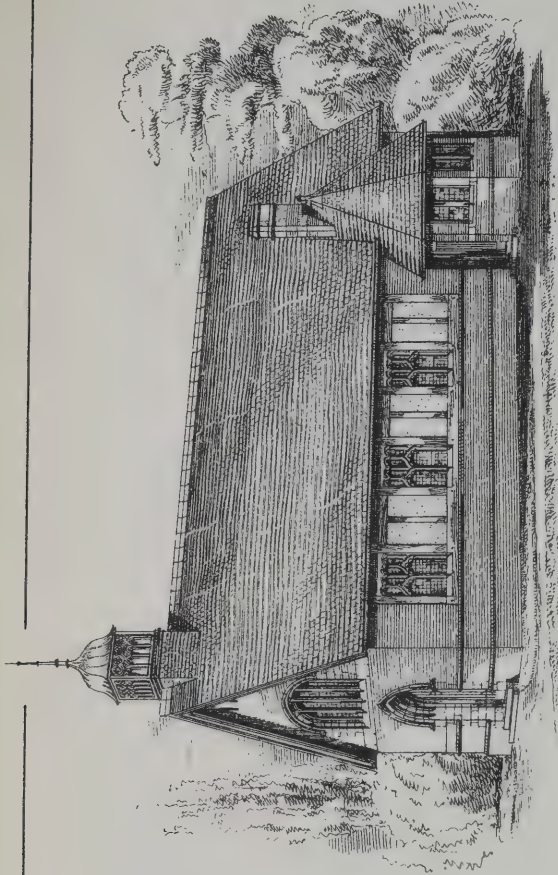


Plan

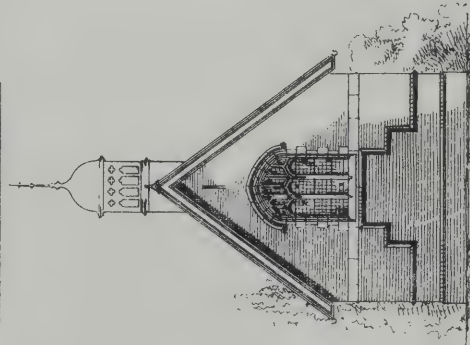
Interior View



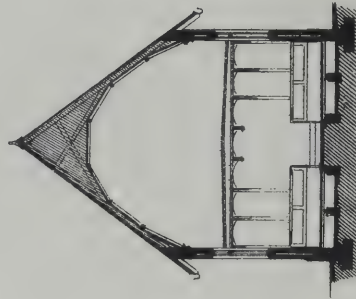
Perspective View



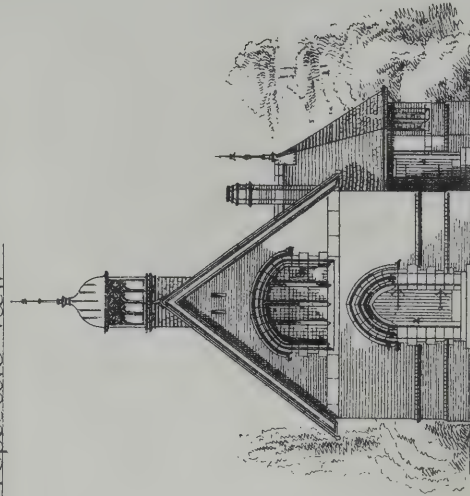
Side Elevation



East Elevation



Section



West Elevation

Clark & Moscrop, Architects.  
Freetown, Dartington, 1884.









FIRST LORD'S  
DOOR

2<sup>ND</sup> & 3<sup>RD</sup> LORDS'  
DOOR

PARL<sup>MTY</sup> SE  
DOOR

WEST (P)



HORSE GUARDS.

WAR OFFICE COURT Y  
WITH ARCADE COVERED  
AS SCREEN.

WAR - OFFICE.

WHITEHALL

10 5 0 10 20 30 40 50 60 70 80 90 100





HORSE-GUARDS

SEC. OF STATE'S  
DOOR

(K) FRONT

SOUTH WING



GATEWAY (IN) TO  
ADMIRALTY COURT YARD  
& GREAT QUADRANGLE.

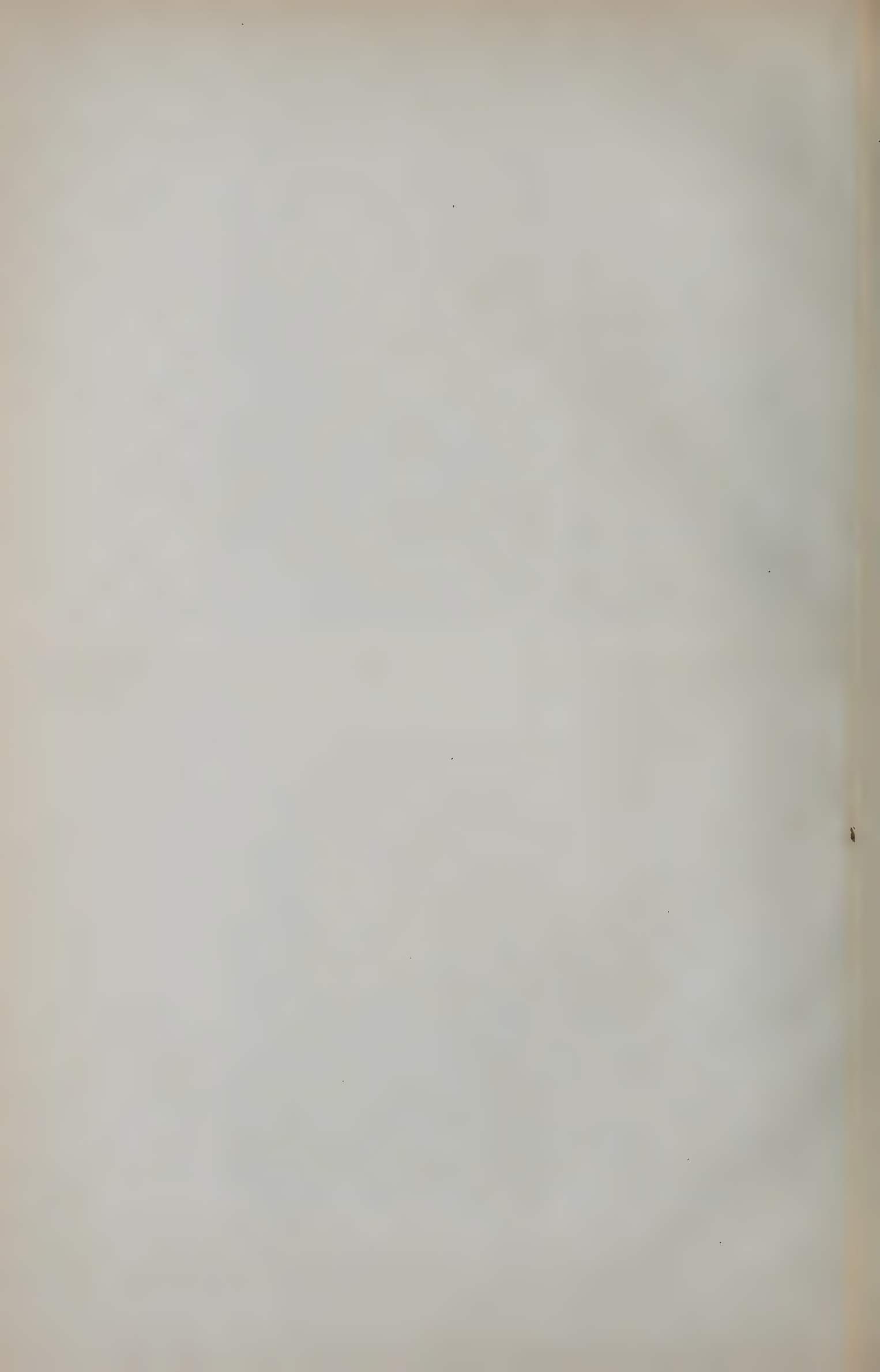
GATEWAY (OUT)  
OPPOSITE NEW STREET.

NORTH WING.

FRONT.

ADMIRALTY.









Sprague & Co. 22, Martins Lane, Cannon St. EC

HOUSE of KILLINEY & CO. DUBLIN  
The Rev. Henry Palmer

T. N. Deane & Son, Archts.  
Upper Merrion St.  
Dublin.









"INK-PHOTO" SPRAGUE & CO. LONDON

THE OLD CHURCH, SHIERE, SURREY.

FROM A WATER COLOR DRAWING.

BY E. F. C. CLARKE.





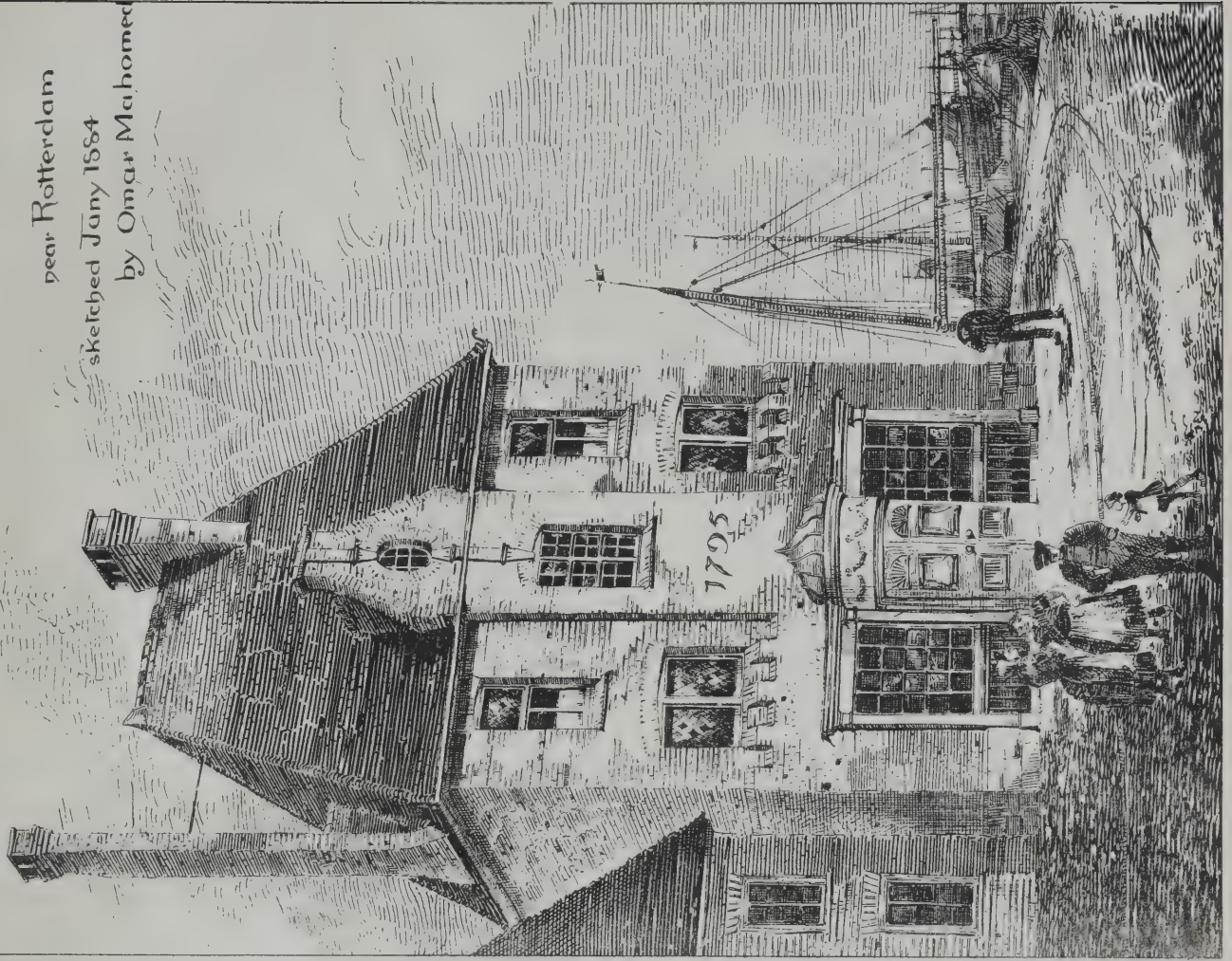


HOUSE at Delfhaven

near Rotterdam

sketched Jan'y 1884

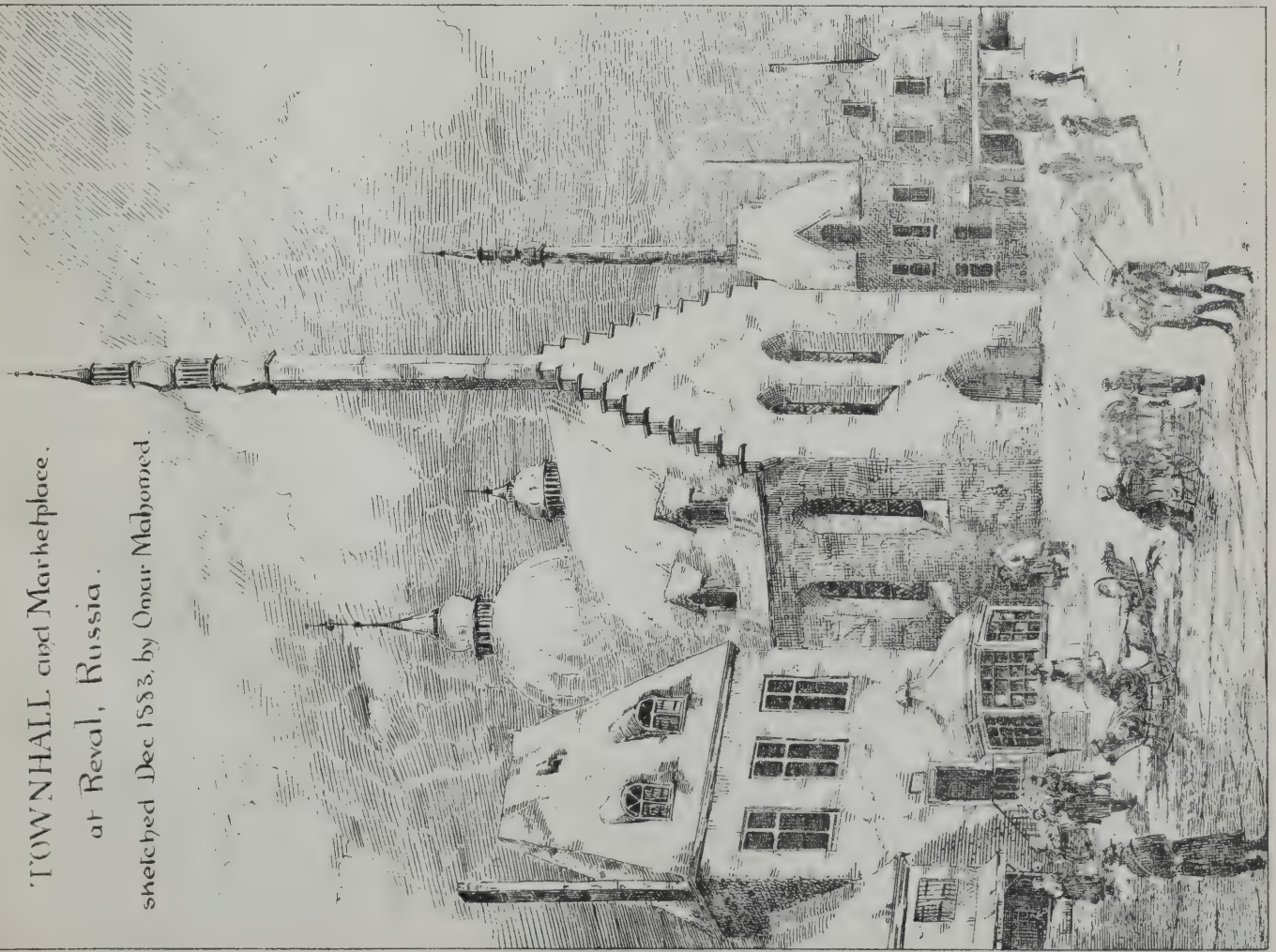
by Omar Mahomed



TOWNHALL and Marketplace.

at Reval, Russia.

sketched Dec 1883, by Omar Mahomed.









## ILLUSTRATIONS.

## DESIGN FOR THE WAR OFFICE AND ADMIRALTY.

WE publish this week reductions of two of the geometrical drawings which represent the design by Messrs. GLOVER & SALTER for the new offices for the Admiralty and War Departments. It is one of the nine designs selected by the judges, and is the only one which is Gothic in style. From the small scale of the illustration justice is hardly done to the detail of the original, but we intend to publish a bay on a larger scale.

## HOUSE AT KILLINEY, CO. DUBLIN.

## HOUSE AT WHALLEY.

THIS house, which belongs to Mr. J. N. WITHERS, is one of a number of houses built in Whalley during the last eighteen months from the designs of Messrs. STONES & GRADWELL, architects, of Blackburn. The walls are faced with pressed bricks from Coppull, near Wigan; and the quoins and moulded base, string and label courses, the moulded angles to windows and doors, and the patera in the gablet at front, and also the ridge and hip tiling, are all from the works of Mr. J. C. EDWARDS, of Ruabon, and, being of a dark-red colour, contrast agreeably with the lighter colour of the main walling. The only stone used is for window-sills, door-steps, and thresholds, and is from Longridge, near Preston. The roofs are covered with green Velinelli slates, except the porch roof, which is tiled. The woodwork throughout is yellow pine, painted. The lead lights in the vestibule and porch, and in the staircase window, have been tastefully executed by Mr. JAS. JONES, of Charles Street, Manchester. There is a very fine view from the balcony on side elevation over the Ribble Valley, and from the front windows over the picturesque village of Whalley to Whalley Nab, so often mentioned in HARRISON AINSWORTH'S "Lancashire Witches."

## MISSION CHURCH.

THIS mission-room is proposed to be erected upon the site of a large church to be built afterwards. When the church is built the mission-room will be incorporated into the scheme, and be used as school and parish-room. The cost is 400*l.*, exclusive of seats, pulpit, &c. The walls are hollow, built of red brick; internally they are plastered, and have wood dado. The roof is covered with plain red Staffordshire tiles. The architects are Messrs. CLARK & MOSCROP, Feethams, Darlington.

## RESIDENCE, VESPER GATE, KIRKSTALL.

THIS house, which was completed during the summer of last year for Mr. EDMUND BUTLER, is situated near the celebrated Abbey, and from the windows of the principal rooms charming views of the ruins are to be obtained. The building may be described as a residence in miniature, it being the owner's wish that the design should have a cottage-like appearance. It is built of deep red brickwork, with red terracotta strings and labels, the gable ends, some of them, being tile-hung and others corbelled out and timber-framed with panels, cemented and finished a cream-white colour, and provided with overhanging barge boards with shaped moulded pendants. The roof is covered with Staffordshire red tiles. The exterior woodwork is painted a peacock blue-grey colour, the window casements being ivory white, the former tint contrasting well with the deep red of the brickwork. The interior contains three reception-rooms, hall, gent's coat-room, butler's pantry, kitchen and scullery, six bedrooms, dressing-room, linen-room, bath-room, and other requisite accommodation, besides good cellarage in the basement. The chimney-pieces and other internal fittings were all specially designed by the architect. The total cost, including outbuildings and entrance gates, was a little over 1,300*l.* The work has been carried out from the designs and under the superintendence of Mr. WILLIAM H. THORP, A.R.I.B.A., of St. Andrew's Chambers, Park Row, Leeds.

## SHERE CHURCH, SURREY.

THE illustration is taken from a water-colour drawing by Mr. E. F. C. CLARKE, architect, which was admired when exhibited at the Dudley Gallery.

## TOWN HALL AT REVAL.

RUSSIAN buildings in the smaller towns are disappointing on close inspection, though effective enough when grouped and at a distance. The old town of Reval—as distinct from the new suburbs—is built and fortified with enceinte and moat on a hill overlooking the harbour. The town hall illustrated dates from the eighteenth century, the interior showing good detail and character; but the long period of snow necessitates the monotonous plastering of all exterior work, although well built with the stone of the district. In the summer the town looks gay with parti-coloured distemper, but winter gives it a smudgy look. In the churches and public buildings were more elaborate work, but the cold on the one hand and the omnipresent gendarme or soldier on the other, makes sketching and note-taking rather risky work in these Nihilistic times.

## HOUSE AT DELFHAVEN.

THE quiet and characteristic town of Delfhaven on the Maas has many houses of the date of the architectural importance of the one chosen to illustrate. The majority have flush windows with and without architraves; the house sketched showed reveals. The bricks are good in colour, and measure 8½ by 2 by 4 inches; they are finely axed and cut. The shop front appears to be an alteration on the original design, though about of the same date, its detail being quiet and good. The set-off showing the diminished thickness of the wall on the upper storeys is very effective, and might be more often used in modern work with good results. The whole is executed with care and completeness, though simple in detail.

## TOWER OF BETTWS CHURCH, MONTGOMERYSHIRE.

THIS is a type of church tower not uncommon in the county of Montgomery. That at Newtown is very similar. The merit of the design is the picturesque manner in which the tower is terminated, and the skilful combination of bell staging and roof framing. Nothing could be happier than the simple method here adopted, of bringing a considerable breadth of wall into a pyramidal form within a moderate height, and at the same time yielding in the whole form a proportion in every way satisfactory. The contrast between the close timber framing of the upper stages with the frequent repetition of deep shadow produced by the intermediate spaces, and the breadth of plain surface in the lower part, is a master-stroke of design. The illustration is a reproduction of drawings by Mr. J. H. BECKETT, of Mr. LYNAM'S office, Stoke-on-Trent.

## THE ADMIRALTY AND WAR OFFICE COMPETITION.

THE judges appointed to consider the designs in the competition for the new offices for the Admiralty and War Departments, on the site adjoining the north side of the Horse Guards, have agreed to the following report:—

1. The competition consisted of two parts, the first an open one of sketch designs, subject to the conditions laid down in the instructions issued in September 1883, by the Commissioners of Her Majesty's Works and Public Buildings.

The judges were directed to select ten designs from those sent in to this first competition, or such less number as they might think fit, the authors of which were to be invited to compete in the second or final competition, for which matured drawings were to be submitted.

2. One hundred and twenty-eight designs were sent in by March 1 of this year for the first competition, the names of their authors being contained in sealed envelopes, which were not opened until after the selection. The judges, after full consideration, selected nine designs, the authors of which were invited to enter into the second competition, for which further instructions and suggestions were issued.

The authors of the selected designs are as follows:—Messrs. Glover & Salter, Poultry, London; Messrs. H. Hall & W. H. Powell, Doughty Street, London; Messrs. Leeming & Leeming, Halifax; Messrs. Maxwell & Tuke, Manchester; Mr. Thomas Porter, Norwood; Messrs. Spalding & Auld, Queen Victoria Street, London; Messrs. Stark & Lindsay, Glasgow; Messrs.



Verity & Hunt, Regent Street, London; Messrs. A. Webb & E. J. Bell, Queen Anne's Gate, London.

3. The matured drawings of the second competition were sent in by June 21 last.

4. The judges, after a careful examination of these designs, selected three as possessing especial merit, namely, those of Messrs. Leeming & Leeming, Halifax; Verity & Hunt, Regent Street, London; Messrs. A. Webb & E. J. Bell, Queen Anne's Gate, London.

5. After further consideration of the relative merits of these three designs, the judges are unanimously of opinion that, taking the plans and elevation together, and having regard to the conditions of the competition, Messrs. Leeming & Leeming have produced the best design, and they accordingly recommend to Her Majesty's Government that, subject to the approval of Parliament, Messrs. Leeming & Leeming be employed as architects of the new building for the Admiralty and War Office.

(Signed) HUGH C. E. CHILDERS.  
W. H. SMITH.  
EWAN CHRISTIAN.  
P. C. HARDWICK.  
G. J. SHAW-LEFEVRE.

July 26, 1884.

### SANITARY ASPECTS OF INTERNAL FITTINGS, &C.\*

BY G. AITCHISON, A.R.A.

THE two prime necessities for health are pure air and pure water. I believe we in London have generally little to complain of as regards the quality of the water supplied us by the companies, however much we may complain of the cost; but as to the air, "the least said is the soonest mended." Swift's description of London milk in his day pictured a wholesome beverage as compared with the air we have to breathe. I presume the native air of London is much the same as other air, perhaps a little moister from the river, but we necessarily adulterate it by the breath and exhalations of 5,000,000 human beings, without taking into account the breath and exhalations of millions of horses, jackasses, dogs, cats, mice, rats, pigeons, sparrows, and other animals; we wilfully adulterate it by the beastly condition of our roads and streets, by pouring into it the vapour from our sewers, and from the blow-holes of the Metropolitan Railway, and the gas and smoke from our factory, steam-engine and domestic chimneys, so that what with the carbonic acid gas, the sulphuretted and carburetted hydrogen, carbonic oxide, the vapours of diluted sulphuric, nitric, and muriatic acids, our constitutions are ruined. But there are thousands of other noxious vapours that help to form the delicious fluid we breathe; and, lest the gases and vapours should not supply us with enough poison, we have the mixture thickened with the fine particles of iron, stone, leather, cotton, wool and hair, horse-dung and soot. Those who have gone before me have probably told you some of the requirements for keeping the air and water inside your houses no worse than they are outside, for if you want the water better, or at least more wholesome, you must boil and then filter it through a clean filter; you must sift out the coarse particles from the air, filter or burn the fine particles, and absorb the deleterious ingredients. You have probably been told how to keep your houses dry, how to prevent damp vapours from rising inside them, how to let in enough sunshine, and how to warm and ventilate them; and, as the learned gentleman who comes after me will tell you how health is affected by colours, there is little enough left for me to say.

The old Roman's prayer was to have a sound mind in a sound body, and, were it not for the foul air of London, there seems little reason why Londoners should not be as strong and healthy as the old Romans, if they would but imitate their example; for, though we have less warmth and sunshine, we are rarely afflicted with ague, and have none of those mephitic exhalations which are supposed to cause their pernicious fever. The Romans lived hardly and sparsely, drank but little wine, and well tempered that with water; they exercised themselves every day in gymnastic exercises and their drill; they rose before the lark, and went to bed with the lamb, and by means of a daily Turkish bath kept their skins in perfect condition.

You all know that Count Cornaro was so eaten up by indigestion, gout, and rheumatism, that when he was forty he was told by the doctors he had not six months to live, yet, by merely limiting his diet and his drink to what was purely necessary, though he was no teetotaler, taking plenty of outdoor exercise, and keeping himself cheerful, he lived in health and happiness until he was ninety-eight years old, and some say that he was more than a

hundred. There is another point to be mentioned. Don't over-work yourselves; remember the French proverb that you should "Never kill yourself to get your living." And don't fret yourselves, "Sufficient for the day is the evil thereof."

I fear you will say all this has little to do with the internal fittings and decorations of houses, and that is true enough; but if your bodies are crazy with late hours, over-work, over-eating, over-drinking, want of exercise, want of rest, and want of quiet, you would find Paradise itself unwholesome. I am inclined to believe, in the present state of London air, that if every house could be properly built and properly ventilated, it should be hermetically sealed to the outer air; but I fear such perfection is hardly to be looked for in our time, and I therefore say that the things we have mainly to guard against are dirt, dust, and the fouling of the air. By dirt, I mean, when speaking to an audience like the present, the street mud we bring in with us, consolidated external and internal soot and dust, and such soft matters that are occasionally dropped about, such as particles of food, and the like. Every crack in a floor gets filled with this, so it is of the utmost importance that this dirt, if not to be excluded, should at least not rest for ever with us, and be liable to putrefy when exposed to damp and warmth. Every open joint between the floor-boards, and beneath the skirting, is usually filled up flush with dirt. Besides the dust from the streets, we make our own dust inside our houses; particles from shoes, from wood and stone, from our clothes, oil-cloth, mats and carpets, are constantly being worn off and carried for a time in the air, together with the scales of our constantly renewing skin; and as soon as the moving air is overlaid or becomes comparatively still, everything is covered with light dust, and a great deal of this dust is what the doctors call septic, or putrefying dust. Mr. Brudenell Carter, the eminent oculist, in his letter to the *Times*, described how he had reduced this to a small amount, and that, in consequence, the health of his family had improved. As regards floors, constant wetting is not wholesome, and even scrubbing will not remove dirt far down in the crevices of boards. Nothing is better for preventing the permanent location of dirt than really good hard wood polished parquet, but if that be found too expensive, then let the joints of the boards be well scraped out, filleted with wood when wide, and let all the joints be puttied. And let the whole floor be painted or varnished; dust is then more easily and completely swept up, and a wet flannel cleans the floor; but with parquet, perhaps a washing once a year is enough with clean sweeping, and the wholesome application of turpentine and beeswax.

These remarks apply also to all open joints in woodwork, furniture and plastering; they all get filled with dust, and should be puttied up, and the dust kept out. Smoothness of surface is also a great help to cleanliness, and certainly as few ledges and holes for dust as possible should be left where the parts cannot be daily dusted. This particularly refers to wall surfaces and to undercut ornaments in cornices and the like; tall bookcases and cabinets always have their tops covered with thick dust.

As to woven things, whether of cotton, wool, or silk, the less there are of these about a room the better; and wholly carpeted bedrooms are simply an abomination. A few rugs in sitting-rooms for the feet are certainly all we require, and woollen shoes are better than rugs in a bedroom, for, though rugs are easily moved and swept under, we know from Mr. Spurgeon's converted housemaid that this is not always done, for when she was pressed as to her works that were to prove her faith, she triumphantly pointed out that she now never swept the dust under the mats or hearthrugs, but always carried it away.

What is still worse than a carpet, which is usually beaten yearly, is tapestry or other woven hangings, which often remain in position until they are worn out. Blinds we must have, but they can be glazed, and they generally get a yearly washing; but we might altogether abolish door and window curtains, and woven mantel-shelf coverings and such like follies. It would also be healthier if we covered our chairs, seats and sofas with leather, instead of silk, velvet or cotton. The gilt and enamelled leather we can get, if not quite so beautiful in point of sheen, may be of excellent design and harmonious colour.

Next to polished wood, tiles, marble, glass and marble mosaic, the best wall finish is oil paint; this can be made agreeable to the eye by simple flat tints of harmonious colour, or it can be ornamented with floral or arabesque ornament, or with the highest triumphs of the painter's art, and this last will not only mark the owner's real taste for art, but will prevent the accumulation of dust on the picture frames.

Unfortunately oil paint, except in flat tints, is beyond the reach of all purses. We must all admire the great skill that has been displayed in the designs of paper-hangings, which charm us by the beauty of the forms and colours with which they are enriched. It is needless to say that if damp gets into the walls or partitions on which paper is hung, it at once becomes a source of danger from the putrefaction of the paste with which it is hung, and the size used in its printing. Wall papers too absorb foulness from the atmosphere, and must be often renewed, and when this is done, it is of the utmost importance that all the underlying paper should be stripped off and the walls washed.

Flock papers should never be used, except when they are

\* A paper read at the Conference of Architects at the International Health Exhibition.



painted over, as they form a natural receptacle for dust, and seem to absorb the greatest quantity of foulness from the air, and when the flock is not dyed "in-grain," whenever they are touched some of the colouring matter comes off and is mixed with the air of the room.

I am greatly inclined to recommend the varnishing of all papers, they can then be cleaned with a sponge; but it is absolutely essential to varnish them in nurseries. Children will lick the papers, and neither lead, copper, nor arsenic can be good for them, and neither size nor whitening are substances you would give to children without medical advice.

Let me say here that you cannot have your windows cleaned too often. When they are dirty they not only exclude light and sunshine, but are covered with thickened human exhalations and dust. If you are wealthy enough to have a dressing-room, banish into it every superfluous article from the bedroom; half the bedrooms in London are encumbered with cupboards full of boots, and wardrobes of old clothes, with baskets for dirty linen, books, ornaments, curtains, carpets, and the like, not to speak of mouldy sponges, nail and tooth-brushes; these things occupy some of the air space, and pollute the remaining air with their exhalations.

By far the most important thing in a room is its ventilation, yet as a rule no room has any direct ventilation, except through the chimney and an open window, and when the window is shut the only ventilation is by the fireplace, so that all the air that comes in is tainted by the soot; the highest point of the opening is below the mouth when sitting, and often when in bed. If anyone wants to know the effect of this, let him get the library ladder, and go gradually up it when he has been sitting long in a room with the door and window shut and a gas-light burning; a foot or two above the level of the burner the air is found to be much hotter and closer, very much more so when he is above the top of the door, and unbearable above the top of the window, for some air generally gets in from their crevices, particularly when the room is much warmer than the air in the passages or the street.

It is stated that to keep a closed room sweet, fifty cubic feet of air is wanted for each person for every minute he remains in it, or three thousand cubic feet for an hour. Consequently a room, 20 by 15 by 10 feet high, only contains enough wholesome air for one person to breathe for an hour; most of us would consider this a large bedroom, which we should be content to occupy without any express ventilation for from eight to ten hours. Fortunately for us we raise the temperature of the air of a room by merely remaining in it, and the colder air then seeks an entry. The imperfection of workmanship affords access to the fresh air through the crevices of ill-fitting windows, doors, floorboards, skirtings, and the like, besides what penetrates through the substance of the walls, partitions, and ceilings. Were it not for this accidental fresh air death from suffocation would be quite common in bedrooms without a fireplace, *i.e.* if the rooms were as hermetically sealed as the receiver of an air pump. But we may see what damage we are doing ourselves, when we know that one of the main exciting causes of consumption is foul air. In this dark climate artificial light must be used in our sitting-rooms, and is generally used in our bedrooms. For an equal illumination gas fogs the air less than any other light got by combustion, and the reason we feel gas more is because we use much less light when we burn lamps and candles, and also because it is rarely perfectly burnt, and some escapes into the room; gas must have some sulphur left in it to insure detection when it escapes. At any rate we all know that a room well lit by gas will communicate its foul taste to the air in ten minutes after it is lit.

I have found that a room may be fairly ventilated, and be free from the taste of gas by using Boyd's hygiastic grates, which supply fresh outside air warmed in a chamber at the back, with Rickett's or Hammond's ventilating gas pendants, which not only carry off the products of combustion, but also remove much of the vitiated air from the room. In new houses the ventilating-box of the gas burner should be carried into a hollow chamber round the flue pipes, or into one of Boyd's ventilating flues; these are made of iron plates forming the withe between the smoke flue, so that when there is a fire the ventilating flue is heated.

When this ventilating box is carried into a smoke flue, or even into an empty flue, particularly when ventilating grates are not used, there is often a difficulty with it; in the case of smoke flues the smoke is brought into the room, and in case of empty flues the cold air is often drawn down so violently as to extinguish the gas; or when the draught is less to cause the gas to flicker, so that you cannot read by it. We may hope soon to have in our rooms the electric light in use; but even then it will not enable us to dispense with ventilation.

It has been found that the colours of rooms have a very important influence on health, but this subject will be treated by my successor.

I have no doubt that beauty of form and colour have a very important effect upon our health. Nature makes everything useful, and most things beautiful; and as she usually attains many ends by one means, the beauty she so lavishly spreads for us may be as good for our health as it is necessary for our delight. All of us can bear witness to the dulness of a room of one colour, in which we have to sit when we are without occupation, and the desire we

then have for some beautiful and intricate pattern to relieve its monotony. Lord Brougham's well-worn quotation then impresses us:—

The want of occupation is not rest,  
A mind quite vacant is a mind distress'd.

When a room is adorned with pictures we have not merely occupation, but delight, and those higher emotions that are only excited by the fine arts. When we choose wall papers those that are more beautiful in form and colour are to be preferred. We should, however, satisfy ourselves that the patterns on the papers with which our rooms are hung have not a look of motion. Nothing is more distressing than to be in a room where the pattern of the paper seems always crawling like a bag of worms. It would be well if we could have all things about us beautiful in form, elegantly simple, and all the colours harmonious and restrained; these great qualities seem to impart to us the feelings of self-restraint, dignity, and repose.

I am afraid I have trespassed too long on your attention, and I can only hope that the few simple truths I have put before you in so homely a manner may have the effect of drawing your attention to this subject; and if this paper does no more, it may serve as a contrast to the learned and eloquent papers that have gone before, and will follow it.

## HYGIENIC VALUE OF COLOUR IN THE DWELLING.\*

BY WILLIAM WHITE, F.S.A.

IN treating of this subject I must claim your attention briefly to the hygienic value of colour in itself, and apart from the pigment or colouring matter which represents the colour, and with which alone we are commonly considered to be primarily concerned. Colour has been regarded too much as a mere matter of taste, art, fashion, fancy, luxury, civilisation. It is all this, but it is a very great deal more than this from a sanitary point of view. To some it may seem trifling, to some a mere truism, when I gravely and seriously maintain the great need there is for teaching the public generally that colour is indispensable to man's well-being and happiness; and that the deprivation of colour might render him liable to physical and even mental deterioration.

Good colour imparts to the interior of a dwelling a finished and cheerful effect, to which none can be wholly insensible whatever may be their notions as to its real influence. Our optic nerve is directly and actively exercised by the presence of colour. The senses are thus affected by colour as they are by other external influences, such as light or warmth. It is a recognised pathological fact that colour of some sort is indispensable to the healthy condition of the eye, and that the condition of the brain again is greatly dependent upon the healthy action of the nerves thus affected. These nerves are affected in a way sensibly different by different colours; in other words, in obedience to, and in accordance with, the pace at which the pulsations of light reach the eye, and upon which depends the nature of the colour seen. This sensitiveness extends also to the brute creation. By red these nerves are excited. By green, in like manner, they may be soothed; or they may be rendered torpid by the presence of blue. Yellow, like light, is the colour which the most strongly attracts the eye to itself. We are affected by black and white in the same sort of way as by darkness and light. Light in moderation will produce alertness or wakefulness; in excess it may produce restlessness and languor by weakening or dissipating the powers of attention. Shade may induce a frame of mind favourable to attention, contemplation and repose; in excess it may induce melancholy and depression.

It is undeniable that the human system is thus affected; and when, from want of proper colour, these nerves have not been duly exercised, red is the colour most acceptable to the eye, bringing into healthy action the organs that had become inert. Hence, again, it is, that after long and close application, especially within doors, the eye can repose with satisfaction upon the soft blue of the sky or of distant scenery. The change is really needed; by the colour alone the optical sense is relieved, and the eye is content to rest, in its extended focus, upon this cool and refreshing and, as it were, more distant colour—this perfect mixture of black with white, of darkness with light. It may be of comparatively small moment to those who enjoy constant change of scene, occupation or action. But all who labour require recreation and refreshment. And it is surely difficult to understand how it is, that with all the popular outcry for light and cheerfulness in hospitals, unions, schools, homes for the poor, a similar outcry for even a moderate amount of well-disposed colour has been but rarely if ever heard. That the sick and the poor should necessarily be condemned to drag out their existence within whitened walls, and without a spot of colour to relieve the dulness, to cheat

\* A paper read at the Conference of Architects at the International Health Exhibition.



the cheerlessness of their monotonous life, shows that sanitation has not made the same advance in this as in other branches of the science. And herein Miss Florence Nightingale has much to answer for. In her excellent and popular notes on Nurses and Hospitals, she recommended the use of glazed pure white tiles for the lining of the wards, to the exclusion of buff and red, or other colours which might be more cheerful, less glaring, and less costly.

Colour may be called a plaything or luxury, but there are few persons, if any, who would be able to live for a long period in a light whitewashed, or in a dark blackwashed, apartment, void of other colour, without deterioration. In the one case a tendency to idiocy might be induced, and to melancholy madness in the other. People have been blinded by the white glare of the desert sand, or of the mountain snow. They have become mad or imbecile through confinement in a dark cell. This must not be called an exaggerated illustration, dragged in as a mere sensational argument; for as in other matters, it is mainly through the more fatal results that men can be brought to see the great danger of neglecting precautions which to them have appeared to be trifling, needless, and obscure. I have learnt, by my own experiment, that in the blinding, burning snow of high altitudes the eyes and the skin may be effectually protected by a change apparently so very slight and trifling as that of wearing a brown gauze veil instead of a blue one. Special colours have been used medically in shades and glasses for the protection or preservation of the sight. The fact of some blind persons being able to feel colour with the finger shows how wonderfully their perception is connected with the whole nervous system. I remember the case of a blind boy who described the touch of a scarlet geranium as the sound of a trumpet. It is said that many of those who are called colour-blind are not insensible to the influence of colour, although they may not have the power of distinguishing between certain complementary colours. The optic nerve may perform its office, but there would seem to be some local condition of the retina or of the cornea which interferes with the reception of certain rays.

In order to be healthy and cheerful, colour should be æsthetical; that is, in true accord with right perceptive feeling; in accord with Nature, from the study of which all our best colouring is derived. We need not, for daily use, gaudy and startling effects, nor yet a dull monotony, but colouring of such force and variety as shall be essentially cheerful and agreeable. Hence we see that the employment of colour is not a matter of mere option or of taste, but of healthful, cheerful, and wise enjoyment. It must not be said, therefore, that I unduly exalt the office of the house decorator if I insist upon the artistic employment of good and harmonious colour, as well as upon the use of wholesome colouring matter in the most ordinary finish of the dwelling. And this brings us to the practical application of the subject to common use.

It is of course imperative that the walls should be constructed, and prepared, properly to receive decorative finishings. The necessity for this yet more strongly forces itself upon our notice when we find that the elements of decay supposed to arise from damp in blistered softening plaster are intimately and unmistakably connected with bacterian life and activity. The investigations of M. Parize have shown that this life will permeate from an infected surface into those portions of a wall which may appear as yet to be perfectly sound. This may serve to indicate also the unwholesomeness of accumulating layers of old paper-hangings, and bad paste or size.

The preservative properties of preparations of lead and arsenic, when employed in decorative work, whether internal or external, arise no doubt to a considerable extent from their antagonism, as to all organic life, so also especially to this species of vitality. But this cannot justify the continued unwholesome use of lead and arsenic for the decoration of dwelling-rooms, though the house-painter will still insist that white-lead and oil-paint form the most efficacious covering medium that has been discovered. The trade in it has been long established, and he has been educated in its use; he is disinclined to change, and he justly hates mere experiment. But in interior painting substances are now gradually taking the place of white lead, which have ceased to be open to the charge of being experimental. The scientific investigation of their respective merits can be carried on only by those who devote themselves for the time to the subject, and many of these things will be submitted to scientific test under the auspices of this exhibition. But the substance called Charlton-white seems to have established its reputation as a wholesome and permanent covering; and the different forms of silicate paint are innocuous, and efficient for purposes of decoration. The colour of many pigments mixed with oil deteriorates, some tints fading whilst others deepen or turn almost black—varnish turns yellow with age. Thus the tone of the tints beneath become changed with time. A varnished wall surface loses its clearness and freshness in the course of years, though still retaining a pleasant tone; and it is otherwise of the greatest value, especially in London, on account of the ease with which it may be wiped down, and kept free from the accretion of dust. But an ordinary tinted paper with dado below and lighter colour above, hung on clean and sound walls, and varnished, is one of the best, most wholesome, durable, and cheap modes of good and simple decoration. A still less costly, but less durable

decorative medium is to be found in the washable distempers, such as the Duresco, made by the manufacturer of the Charlton-white, or the Calcarium. Their great advantage is that the colouring-matter does not rub off on the clothes, or into the air as dust. One of the most valuable of decorative media is the Crete-enamelling of Messrs. Owen, of Brook Street. Unfortunately they are not represented here. They do not like to appear to use such exhibitions as an advertisement—a lesson which might well be learnt by some whose interest in the hygienic success of the exhibition appears to be on the side of reciprocity, with one foot, at least, down in the scale; and who would seem to be pointing at themselves in sarcasm the old proverb that "Good wine needs no bush," some of their wares having far less to do with sanitation than with commercial enterprise or money-getting. The Crete-enamel is more costly than paint in the first instance, but it keeps its first freshness longer. It is perfectly innocuous, and is less absorbent even than varnish. It possesses all the advantages of varnish without its disadvantages. And when I say that in its washable form it is in fact a colour-polish, its superiority over varnish in appearance must be manifest. In its unwashable form it is still non-absorbent, but is more liable to injury though equally durable.

Paper-hangings, again, are now made washable at the small cost of one penny per yard. It is of the greatest consequence that their colouring-matter should be free from volatile mineral poisons; and that, whatever be its composition, it shall not rub off. The penalty should be sharp and heavy upon those who offer injurious paper-hangings for sale. In every case, pending legislation, the purchaser ought to demand a written or printed warranty from the vendor. It would be a new departure, in the most desirable direction, if the Sanitary Institute, or some other such body, could establish an organisation for the protection of the unlearned and unwealthy portion of the public from the supply of such deleterious things. Only a few years ago even a medical man, a tenant of mine, who had selected his own paper for the dining-room, was made seriously ill from the imperfectly-fixed colouring, of rich yellow and brown, made with orpiment of arsenic. Other members of his household suffered, as well as the men employed to remove it from the walls. It is a satisfaction to know, that except upon the score of unscrupulous trade competition, it is needless that such goods should be sold at all. There are several comparative illustrations of this in Mr. Henry Carr's exhibit, No. 852. Messrs. Woollams, Jeffreys, Heywood, and others, exhibit an ample variety of all colours and shades in a guaranteed harmless quality. In admirable decorative material we have also the Hindley's Japanese leather papers, Lincrusta-Walton, Hall's Corovellum, and others, together with a variety of damp-proof paints for interior surfaces, of questionable value in this especial respect, seeing that damp should be kept from penetrating from the outside, and not be merely covered up from sight within.

As a wholesome decorative covering for walls, a panelling of pine or fir is said to be one of the best on account of its resinous odour. But such panelling must not be allowed to become a harbour for damp stagnant air behind it. These with other woods of a harder nature have always been popular. And a beautiful variety has been introduced in Roberts's foreign and colonial importations.

But unprotected panelling becomes dangerous in case of fire. There are now, however, for woodwork invaluable safeguards against fire, such as the Asbestos paint, and the Cyanite paint, which ought to be made use of largely for wall panelling and floors. Calamitous fires have been already prevented by the employment of them. But we cannot, with all of them, quite so perfectly preserve the charming brightness and freshness of the natural grain of the wood beneath them, and, indeed, a painted surface is more commonly implied by their use, and they need, so to say, a fixing. Nevertheless, these paints give a good grounding for subsequent applications, whether paint, polish, stain, or varnish. It ought never to be forgotten that in floors it is not enough to dress only the parts which will be covered with carpet. And care ought to be taken that the dressing should be an impervious preparation of some sort or other; so that the floor may be wiped or washed without becoming saturated with water. Unless the boards are ploughed and tongued the joints should be well filled, so as to prevent draughts to the feet, the percolation of water, and, above all, the circulation of dust, to which an open joint is but too favourable. A wide field for wholesome decoration is opened up by the fibrous plaster and canvas plaster, made by Jackson and others, but their use may afford an unfortunate inducement to the finishing of a house before its newly-built walls can be properly seasoned for healthy occupation.

In conclusion, I will only say that we may well congratulate ourselves that we live in an age when colour is more prevalent and more really appreciated for its own sake than it had been for a long time previously. I have had the pleasure of throwing together a few general hints as to its application. And convinced as I am that it has been ordinarily regarded too much as a mere personal indulgence for those who can afford to spend their means upon their own amusement or gratification, I would express a hope that I have succeeded in asserting its claim to be considered one of the many requisites of a healthy home.



## WATER SUPPLY.\*

BY THOMAS H. WATSON.

THE management of water, after we have collected it and have got it delivered to our house, is the special subject of this paper.

In the Metropolis there are at present two systems of delivery—the constant and the intermittent. The latter is being gradually superseded. Much valuable information on this and many other matters connected with the subject is published in the report of Colonel Bolton, the official water examiner appointed under the Metropolis Water Act, 1871. I do not understand that any effectual power is given by Parliament to compel the companies to deliver pure water. What is wanted is not a “standard of filtration” on which the companies may agree, but a “standard of purity and softness” on which the public may rely, and also we want “requirements,” not exclusively with the object of saving water, but made also in the interests of the consumers, to facilitate the proper management of it within the house, and to insure the proper cleaning of all cisterns and tanks periodically. The periodical examination of cisterns as to their cleanliness, proper surroundings, and fittings, should be made the work of an independent public officer, acting under the direction of the sanitary authority entirely in the interest of the consumers, whether occupiers of private houses, chambers, clubs, hotels or lodgings. The great objection to the intermittent service is the much greater storage required in each house and consequent multiplication of cisterns and tanks, and the inconvenience of having to receive at a particular time the whole supply for twenty-four hours.

The constant service, however, requires fittings much improved on those which have been allowed to be used under the old system. The great hindrance to the introduction of this service is the expense and trouble involved in making the necessary alterations to the fittings to limit the waste of water.

For potable water Colonel Bolton recommends that where a constant service is given, a special supply should be taken from the mains so as to draw off water direct from the works (not from any house-cistern, where it is liable to become contaminated, or at least stale). With the constant service, however, cisterns could be wholly dispensed with. An alteration or break down in the mains may necessitate an interruption of the service at any time, and great inconvenience would be experienced if the storage within the house were not sufficient to carry over such a period, be it long or short.

The waste of water that may take place when the fittings are imperfect and the pressure is great, has led to the introduction of a throttle or ferrule into the communication-pipe, lessening the diameter of the water-way to such an extent, that when the pressure is reduced, the water may flow too slowly to be of effectual service. Some storage and a moderate pressure are, therefore, desirable. The constant system, to work effectually and economically, depends upon mutual fair dealing between the water companies and the consumers, but it is not easy to adjust things on this basis, and many persons advocate a mixed system. It is, therefore, important to consider the whole subject of cisterns and tanks.

*Materials.*

Stone, brick, or tile lined with cement, and puddled on the outside with clay, where the ground is porous, are found to be the best materials for tanks of large capacity. Soft water dissolves lime, but cement is not acted upon by any water. It may be trowelled smooth, and kept clean. For house cisterns, stone, slate, iron, lead, zinc, and other materials are used. Of these, perhaps slate is best, but it requires to be most carefully fitted and put together with slate cement and metal cramps. Iron rusts badly when alternately wet and dry; enamelled iron is expensive and uncertain, galvanised iron having a mere coating of zinc, which is dissolved by soft water, cannot be relied upon. Lead, of very ancient use, and its modern rival zinc, are also considered objectionable, and should not be used where anything better can be had. I think that stoneware is the best material for the house cistern, and as the constant supply requires only a limited storage, say 100 to 200 gallons, there should be no difficulty in the general adoption of cisterns of this material, provided they are made and fitted in a way that will admit of their proper use.

Reservoirs for spring water require to be fitted with means to aerate the water at the inlet. Large tanks must be thoroughly ventilated; all, without exception, require to be fitted with means to run the water off to the very bottom—this is called “the wash-out,” without which they cannot be effectually cleaned. A flap-valve and chain is the proper contrivance for this purpose. Tanks are usually constructed underground; it is sufficient, however, if they be half sunk in situations where the earth that results from the excavation can be heaped around and over them in a mound of sufficient thickness to protect the contents from changes of temperature.

The house cistern requires to be close covered to keep out light, dust, and vermin, and no foul air should by any possibility find

access to it. The constant service should enable us to dispense with more than one cistern in any house of moderate size, but if there are more than one the same rules will apply to all. On lifting the cover (which should be kept clean) the whole interior of the cistern should be well lighted and in full view.

Most people would be shocked could they but look in the cistern of their house, but cisterns unfortunately are not usually placed where they can be looked into: the neglect of this is simply amazing. You ask a householder when the cisterns are cleaned out, he does not know. The servant, on being appealed to, only knows that it has not been done since he has been there. I have myself examined cisterns that have not been cleaned out since the house was built though several years have run by. I have found cisterns that could not, by any possibility, be properly cleaned out at any time. I have seen those that have been “done just recently” by an under-gardener, and even a workman, and found them full of vegetable growth, an inch of mud at the bottom, and a quarter of an inch of slime on every side. The cause of this is easily discovered—until lately people had forgotten or had learnt nothing about the necessity for attending to such things, and it is just to admit that the builder, and frequently the architect, had not regarded as important the proper disposition of this part of his work. Cisterns were thrust into any out-of-the-way place, and the plumber was left to arrange his work as it would come easiest for him to execute, without the slightest reference to convenience in the subsequent use of it. Cisterns were multiplied, and the use of the water contained in them varied by subsequent “plumbers’ alterations,” so that things were brought into the utmost confusion, and discredited has resulted all round.

The system now is, to form a separate cistern room in a cool, light, and well-ventilated place in the upper part of the house; here the cistern stands just so much above the floor as will admit of the connection of pipes, and give access to it all round. The cistern itself is close covered. The arrangement I make is this—standing in front of it with the cover removed, you see the service cock near the back right-hand corner, a solid tin trumpet waste to take the overflow and form a wash-out, rises from the bottom of the left front corner; the cistern is fixed a little out of level—the left front corner about an inch lower than the right back corner—to drain the contents away completely when the waste is out. The proper cleaning and rinsing out of a cistern thus arranged is the work of a few minutes. It is to be done every three or four months. No supply pipe is taken from the bottom. At about an inch from the bottom, the supply to the hot water system is taken; three inches above this level the cold water supply is taken in a pipe of sufficient bore to serve all the lesser branch pipes. The object of this is to let the cold supply fail first in the event of any interruption of the service; there are then three inches in the depth of the cistern reserved for the hot water system until the service is renewed.

The under-waste should be syphoned below the cistern to form a trap: the pipe should be carried to some convenient place in the open air, where the end of it can be readily seen by the company’s inspector; this forms an efficient “warning pipe.” At the same time it must discharge in such a way as not to deluge the house when the contents of the cistern is being run off for cleaning.

The regulations issued by the water companies are rather misleading. They suggest that every waste-pipe must be converted into what is called an “overflow-pipe,” that is a pipe taken out of the side of the cistern near the top, and this so arranged as to act as a warning pipe. A cistern thus fitted cannot be properly cleaned out except by such an expenditure of time and trouble as is likely to cause it to be neglected altogether. In my opinion this form of waste-pipe should never be admitted. The “wash-out” and “waste,” when properly fitted, answer every requirement as an overflow, and the end of this, equally with the other, is an efficient warning-pipe when properly placed in view.

The plumber has been so accustomed to perforate the cistern when in position—considering only how he can best accommodate his work without regard to its subsequent cleaning out—that prejudice is likely to arise against the use of the stoneware cistern. I think the plumber should give way in this, and cisterns might then be kept in stock sizes, and perforated as follow, viz:—

Stock size 3 feet x 2 feet x 3 feet = 100 gallons effective capacity.

4 „ x 3 „ x 3 „ = 200 „ „ „

Angles rounded in bottom and sides—glazed brown, yellow, or white inside—provision for service-pipe and waste-pipe as before described and for two supplies on the right side, near to, but not in the front—the lower one to take connection of 1 in. pipe, the upper one 1½ inch.

For drinking-water a separate cistern is recommended. It is not sufficient that this should differ from other cisterns only in being smaller and of a glazed material. Special arrangements must be made in its construction; these must be determined by a careful consideration of its special use and the means by which it may be kept in order.

My idea is that it should be smooth and white inside, so that no dirt could rest in it undetected; glazed and rounded, that it might be readily cleaned; no larger than is necessary, and so shaped that it might be completely emptied and set in order

\* A paper read at the Conference of Architects at the International Health Exhibition.



every day; deep, rather than shallow, with a close-fitting cover going over the top rim no larger than could be safely handled with one hand.

The water required for drinking purposes as water, and in beverages as tea, coffee, &c., is estimated at 2 pints a day for each person; we may double this during hot weather, and double it again, as we need not be sparing where there is such abundance. I should say that 1 gallon a day for each person would be ample for such a cistern, or say 1 cubic foot for each multiple of five persons in a family, starting at 2 cubic feet as a useful size for a family of ten persons.

This cistern should be fitted up in the pantry, still-room, or any clean cool place in the house; its front edge should stand on a hard wood drainer, such as is found by the side of the pantry sink. Let the cistern be in full light, accessible in every part of it, and resting on a projecting bracket, which may also serve as a shelf for glasses.

The bottom of the cistern should be rounded and sloping towards the front, where a ground-in porcelain plug should be fitted so as to enable it to be completely emptied. A porcelain tap, the parts simply and easily cleaned, should be immediately over the plug, and should not draw the water quite to the bottom. The overflow should be provided for by a slight depression in the front of the rim, so that any waste may be observed as it flows down in a channel in the front of the cistern to the drainer. A glass ball ball-valve, supplied direct from the main, and not from any other cistern, completes the apparatus. This tap may be small, the metal nickel-plated, and the ball and arm must be capable of being turned up out of the way.

With a preliminary swirl round and emptying, the plug is inserted, the ball turned down, and the cover put on—the cistern is then charged. Every day, immediately before or during the intermittent supply, it is to be washed out with the remains of the last day's supply, rinsed out with the first of the fresh water, emptied again, and then set in order for the day. This would not take more than two minutes, and for that day at least the drinking water would not be perceptibly worse than that which the company supplies, while the addition of a pound of washed ice in summer time would give it just that degree of coolness that would render its use the more agreeable.

Of the other cisterns in the house I need speak but briefly. The hot-water tank should not be placed, as it frequently is, near to the cold water to affect its coolness. It is a mere accumulator or reservoir on the hot water circulation, and needs no special fitting beyond a manhole for occasional cleaning. It is best placed in the bath-room, where some of its heat may be utilised in a drying-closet.

W.C., urinals, &c., require waste preventor cisterns. All those in use need improvement. The principal objections are that the incoming of the water is attended with noise; this may be obviated by taking the delivery nozzle down nearly to the bottom of the cistern; also the noise and want of force in the flushing of the closet. The valve should be contrived near to the pan, so that a column of water is standing above the valve ready to act the moment the valve is opened.

Where there is an open boiler a feed cistern is required. It has been the practice to put this in a dark cupboard, generally near the kitchen range. For this there is no necessity. It may be placed in any open light place where it can be got at all round; it only needs to be on the level of the boiler. It must have a close-fitting cover, and be kept quite clean. Stoneware is the best material for this purpose.

Too great a pressure upon pipes and fittings causes waste of water. It is advisable, in determining the place for the cistern, to arrange that the pressure does not exceed that which is due to about 25 to 30 feet head of water. In houses of many storeys, with the hot water system, this difficulty cannot be met, and a great want is a really efficient hot water high-pressure tap.

In regard to the management of hot water there are two or three points to be observed. The flow-pipes should always be fitted to a flange joint on the top of the boiler and of the accumulator, the inner surface of which should be smoothly rimmed to prevent the formation of an air trap—the cause of the thumping and vibration often experienced. The flow-pipe should be of larger bore for a short part of its length immediately over the boiler, especially when the water is hard and much deposit is formed at the mouth of the flow-pipe. All supplies should be taken from the flow above the accumulator so as to draw the hottest water. Very short branch pipes should be admitted to hinder the dead water becoming cold and causing waste. The return should take the shortest course to the lower part of the boiler; the feed-pipe should be entered into the return so as to deliver the cold water direct to the boiler and not reduce the temperature of the whole volume stored in the accumulator. The feed should have an elbow or dip at its connection with the return, so as to hinder the hot water ascending into the cold water cistern.

#### *Stop-cocks.*

There should be a stop-cock on the "communication" pipe to enable the service to be shut off entirely. There should be a stop-cock in a convenient place on every supply taken from a cistern, to

enable the workmen to shut off the supply without interfering with the other service of the house, or emptying the cistern when alterations in any the fittings have to be made.

#### *Distribution.*

The conduits for distribution of water now in use are exclusively of iron when of large capacity, coated in various ways to hinder the action of the water in direct contact with the pipes from rusting the metal away. For soft water the pipes are coated, by Dr. Angus Smith's process, with a varnish of coal tar, or by a coating of cement or lime paid over the interior metal surface of the pipes. The joints which used formerly to be made with tow yarn and lead caulked in, are now, where the capacity of the pipe admits of it, made on the inside with cement, to hinder the increase of organic matter observed in water that was allowed to come in direct contact with the yarn. Hard water has little action upon iron pipes, a coating is formed by the earthy salts on the inside of the pipes, and contact with the metal is thereby hindered.

For the smaller pipes within the house, on the whole iron tubes are considered best. Various processes have been introduced for protecting the metal from contact with the water; where, however, the water is at all hard, the inconvenience of direct contact is soon overcome by the deposit formed on the inside of the tubes. For soft and hot water the protective processes of Barffing and galvanising are frequently used, but tubes thus treated do not admit of being worked up, or bent, without injury to the coating, and the only effectual way of employing either process is by taking down the whole of the work after it has been fitted, sending it away to be treated, and refixing the work without any alteration whatever. This becomes an expensive matter, as the cost of labour far exceeds the value of the tubes. Wrought iron may be artificially coated with a deposit of lime after fixing, and, when kept well painted on the outside, tubes of this material are perhaps the best and most economical for hot water work.

Lead in pipes is less objectionable than in cisterns, because these require cleaning, consequently the surface is liable to be exposed to fresh action of the water. Both hard and soft water generally form a coating on the inside of lead pipes, the latter by a vegetable matter, which appears to combine with the oxide of lead, and protects the water from contact with the metal. The facility with which lead can be worked, its strength, durability, and fewness of the joints required, cause it to be preferred for house-work. It is reassuring to be told by those who have made observations, that the action of water upon lead pipes is very slight when the metal is tarnished—a condition that is attained soon after manufacture—and under all circumstances is so slight as to be immaterial. Lead pipes have been made with an inner lining of pure tin. The practical objection to tubes so lined is that they do not admit of the ordinary plumber's joint, consequently their use is limited. Pure tin is the only material to use when difficulty is experienced with other metals, and expense does not stand in the way. Copper, tinned copper, and galvanised iron are not recommended.

It is important in the economical arrangement of the water-service of the house that those offices which require water-supply should be grouped together as much as possible—a point, unfortunately, too frequently overlooked, although easy of attainment when attention is given to it at an early stage of the plan.

Thus, a bath-room is to be preferred that is over a pantry, rather than one that may be more conveniently arranged on the bedroom-floor over a principal room of the house. The disposition of closets, lavatories and sinks, should follow this rule; the pipes may then be exposed and painted to suit the wall-surface, not cased up by joiner's work, or hidden under floors, as is too frequently done to get them out of view, when they have to be carried through apartments in which their appearance is not expected.

#### **LEGAL.**

##### **Cumberland Assizes.**

(Before Mr. JUSTICE MATHEW.)

SCOTT v. THE GREAT CLIFTON SCHOOL BOARD.

##### **ARCHITECTS' FEES.**

This was an action by Mr. T. G. Scott, architect, Workington, for payment of 113*l.* for professional work from the Great Clifton School Board. The plaintiff was employed by the defendants to prepare plans for the erection of an infant school with board-room at Great Clifton. The plans were disapproved by the Education Department on the ground that a board-room was not necessary for the district. A second set of plans with a house for the mistress was prepared, and finally a third set for the infant school without a house for the mistress. The erection of the school upon the third set of plans was proceeded with, the plaintiff superintending the work. After the buildings had reached a certain stage a dispute arose between the School Board and the builder and architect, the Board complaining that the stone used was a bad stone and not according to specification, and that the drains were not puddled at the joints. The Board dismissed the architect from further superintendence of the work, and they declined to pay the builder



for the work he had done. The result was that the dispute between the Board and the builder—whose contract was under seal—was referred to arbitration, and the arbitrator awarded him 34½%. The schools were completed by another builder upon the plans which had been furnished by Mr. Scott, and for which the architect now sought to be paid. The architect also claimed for superintendence, and one of the questions for settlement was whether the architect was entitled to more for superintendence than his percentage on the 34½% awarded to the builder. The plaintiff submitted that he was entitled to more inasmuch as he was wrongfully dismissed. The defendants put in a counter-claim in respect of the negligence of the plaintiff as an architect, and they denied liability altogether on the ground that the Board was a corporation, and that any contract to be binding upon them must be made under seal. The arrangement with the architect was not made under seal, and therefore the Board were not liable for the payment of the claim.

After the plaintiff had been examined, counsel consulted, and agreed, subject to the question of liability, that the amount to which the plaintiff was entitled to recover was 90%, the defendants withdrawing the counter-claim.

The counsel for the Board suggested that the question of liability on the ground of want of seal should be discussed in London, and this course was ultimately adopted.

### NOTES ON NOVELTIES.

**A Simple Fire-Extinguisher.**—Our American kinsmen must again be credited with the introduction of an invention for extinguishing fires in their earlier stages that is so absurdly simple as almost to provoke a smile; yet it is in every sense as effective as any of the small fire-engines, extingueurs, &c., made for that purpose. That efforts have been made by English and foreign inventors to introduce a reliable appliance adapted for domestic and other uses is seen by the many apparatus now before us, all of which are, no doubt, good in their way; and we should be unjust in saying a word against them, but they lack one essential in particular, and that is that their price renders them prohibitory to the great bulk of the community. There may also be weak points in some of them, such as requiring occasional recharging to keep them in order, and such like, which, unfortunately, oftentimes does not get done, and the apparatus, when the fatal time comes, is not workable. Now it is self-evident that if an inexpensive appliance could be made, not dependent on any extraneous aid, but always ready whenever wanted, self-preservation alone would induce all thoughtful persons to provide themselves with it. It may be reasonably asked, as all extingueurs are dependent upon some chemical compound for their action, if it is not possible to introduce the chemical in some cheaper form. Brother Jonathan has answered the question for us in a most decided manner. If we entered a house and noticed an ornamental-shaped bottle of coloured glass on shelf or sideboard, we may probably suppose it contained some new *bonne bouche* or cunningly-devised liquid to administer to our epicurean tastes. But what if we were told that it contained a chemical compound sufficient in all probability to extinguish any fire that could occur in that room? We should scarcely credit our informant. Yet of such a nature is the "Harden 'Star' Hand Grenade Fire-Extinguisher," that we had an opportunity of seeing in operation a few days since. It is simply a stout coloured glass bottle holding one pint of a chemical liquid which, when thrown on to a fire, will extinguish it in a few seconds, if not in too advanced a stage. Of course if one will not effect the object, two or more must be used, but in the experiments we witnessed one sufficed in each case to put out a much fiercer fire than the best friends of the invention could have expected. The experiments in question took place on a piece of waste ground adjoining the Metropolitan Railway in Farringdon Street, and in one case a hoarding had been erected, well soaked with Stockholm tar; petroleum was then soused over this, and a fire lit at the bottom with sticks and paper in the usual manner. Waiting until the whole was one mass of flame, the operator broke one of the bottles over it at the lower part, and in six seconds the whole was extinguished. Another experiment was carried out with a wooden chimney, about 1 foot square and 14 feet high, similarly coated with tar inside. Lighting a fire at the bottom and allowing the whole interior to become one blaze, with fully 4 feet of solid flame belching forth from the top, a bottle of the liquid was broken over the bottom part. This succumbed instantly; the flame at the top was immediately arrested, dwindled down, and all was over in less than a quarter of a minute. We were informed it was the first time an experiment with a chimney had been tried, and the operators were consequently as uncertain as the visitors as to the result. Two more satisfactory cases could not have happened for the success of the invention, and the visitors expressed themselves to be fully satisfied. Should the question be put to us as to what it is, we can only answer that it is a chemical fluid in an hermetically sealed bottle, that will resist a temperature of 40 degrees below zero, is perfect harmless to flesh or fabric, and is said not to deteriorate with age, or in any climate. The effect, when the contents are discharged on to a fire, is that they immediately

vaporise into great volumes of fire-extinguishing gas, so that combustion cannot exist, and the cost of these valuable little appliances is only three shillings and ninepence each. Here then we have a reliable article at a price, as we before observed, within the reach of all, and that every careful housekeeper should place in every room in his dwelling. Reverting again for a moment to the experiments, we may remark that, excellent as they were, in a covered building the results would have been even more satisfactory, for in the open air a large quantity of the vaporised gas is carried away by the atmosphere, but in a room or warehouse this could not escape, and would consequently be utilised for its proper purpose, and assist in extinguishing the fire more rapidly. In America, where the star grenades have been in use for some time, the amount of property they have assisted in saving from fire has been very large, and we hope their introduction into England will prove as great a boon to our community as well as a commercial success to the inventors. Further information respecting them may be obtained of the London agent Mr. J. S. Malcolm, Southwark Bridge Road.

### WORKS IN PROGRESS.

**Messrs. Vigers Brothers**, of Chelsea, have just supplied their imported wood-block flooring to the Board Schools, Harrow Road, Paddington, and Wilde Street, Drury Lane, W.C. The work has been carried out under the direction of Mr. Robson, the architect to the London School Board. We believe these floors, which had been previously supplied to several large schools belonging to the London School Board, are giving entire satisfaction.

**Great Eastern Railway New Hotel, Liverpool Street.**—The whole of the lifts at this building are almost completed. They have been erected by Messrs. Archibald Smith & Stevens, of Janus Works, Queen's Road, Battersea, and consist of one "Stevens and Major's" hydraulic balance passenger lift, 82 feet travel, one hydraulic luggage-lift, same travel. These receive passengers and luggage on the platform of the station, and carry them to all floors in the hotel. One hydraulic stores lift, about 70 feet travel, one direct-acting wine cellar lift, one hydraulic continuous lift for kitchen purposes, two hydraulic kitchen lifts with jigger cylinders, the whole being driven by water from a large accumulator, supplied by a set of treble barrel pumps, in turn actuated by a 6 horse-power Crossley "Otto" gas engine. There are, in addition, several hand-lifts. The whole of the contract has been erected under the supervision of Mr. T. W. Worsdell, locomotive engineer of the company.

**Westwood, near Bradford-on-Avon.**—The whole of this ring of bells have been cracked for many years. As a beginning, one has been recast by Messrs. Llewellyns & James, Bristol; and as soon as funds are forthcoming the remainder will be recast by the same firm.

### SCHOOL BUILDINGS.

**Durham.**—New buildings comprising chemical laboratory, museum, &c., recently erected in connection with Durham School, have been opened. These buildings, which were built from plans prepared by Mr. A. W. Blomfield, of London, comprise on the ground floor a museum and a modern class-room, and above a laboratory, scientific lecture rooms, and a balance room, all fitted up in a most elaborate manner, and heated by hot-water pipes. The work was executed by Messrs. Gradon & Son at a cost of about 3,000*l*.

**Portobello.**—Out of a limited number of competitive plans sent in for this school, the Board have unanimously adopted those submitted by Mr. J. M. Henry, architect, Edinburgh, and that gentleman has been instructed to proceed at once with the working plans. The building will accommodate 300 pupils, and will admit of being easily extended at any future time to receive another one or two hundred.

**Temple Cowley.**—The Education Department having required additional accommodation for 100 children, the architect (Mr. A. Mardon Mowbray, F.R.I.B.A., Eastbourne) of the present school chapel was instructed to prepare the necessary plans, &c. The work has been commenced by adding on to the west end of present girls' school an infant school, 40 feet by 20 feet 3 inches, an entrance porch, cloak-room, and lavatories for infants and girls, book-room, and offices. The style of the present building, Gothic of the early part of the thirteenth century, has been followed in the new part, the walling being of red brick, with blue Staffordshire brick bands and stone dressings, the roof being slated with red roll ridge tiles on top. The two school-rooms can be thrown into one for Divine service, penny readings, teas, &c., by the removal of folding doors, which can be converted into tables, the school desks being convertible into seats, and the infants' gallery into a platform. The flooring will be formed of wood blocks on concrete bed. Mr. A. Collett, of Oxford, has undertaken the contract. The chancel portion will be added later on, also the school-houses.



## CHURCH BUILDING AND RESTORATION.

**Bozeat.**—The work of rebuilding the church tower and re-hanging the bells of Bozeat parish church has been completed. Some five hundred years ago the present church was built and a spire placed on the old Norman tower. The latter was strengthened at various times, and fifty years ago an iron band was placed round it. In 1877 this broke, and some of the masonry of the spire fell on the roof. The spire was then taken down. The old tower also became dilapidated, and it was agreed to rebuild it. Mr. Carpenter (Messrs. Carpenter & Ingelow) prepared plans, from which Messrs. Margetts & Neale, Kettering, have erected an exact reproduction of the old structure. Local stone has been used. The tower stands 100 feet high.

**Chatham.**—The memorial-stones of a new Bible Christian Chapel and Hall in the Luton Road, Chatham, were laid on Monday last in the presence of a large and distinguished assembly. The building consists of chapel and hall with class room, vestries, lavatories, &c. It is situated on a commanding corner site, the front elevation of chapel having square buttressed tower at angle of building with turret on opposite side; large rose windows in centre of arched recess and double entrance porch; the side elevation being divided into five bays with double windows and buttresses between. The elevation of hall is of similar design to side of chapel, to which it is joined by vestry buildings and choir and organ building over. The style adopted is early English, the materials being red bricks with white stone dressings and slated roofs. The inside wood-work and seating is to be of pitch pine. Mr. J. Kingwell Cole, of 28 Mount Street, Grosvenor Square, W., is the architect, and Mr. C. E. Skinner, of Chatham, the contractor.

**Stockton.**—The memorial-stones of the new church of St. Paul have been laid. Mr. J. P. Pritchett, Darlington, is the architect of the building, and Mr. Robert Boyd, Cleasby, Darlington, the builder. It will be of bricks, in the Early English style, and includes a nave with north and south aisles, chancel, organ-chamber, and vestry. It will provide accommodation for 417 people. The following are the sub-contractors:—Masons' work, Mr. R. Boyd, of Cleasby; slaters and joiners' work, Messrs. Adamson, of Gainford; plumbers and glaziers' work, Mr. Geo. Lambert, Middlesbrough; painters' work, Mr. Metcalfe, Darlington. Mr. Smirke acted as clerk of works.

## NEW BUILDINGS.

**Birmingham.**—The rebuilding and enlargement of the Traveller's Rest public-house, situate at Lower Edward Street and Jakeman's Walk, Birmingham, is now completed. The work has been executed for Mr. Alfred Humpage, from designs by Mr. Oliver Essex, A.R.I.B.A. of Birmingham. The contractor was Mr. W. T. Bennett, of Birmingham.

**Birmingham.**—The new premises of the Birmingham and Midland Eye Hospital were opened on July 24 by Lady Leigh. The hospital is a brick building, with stone dressings embellished with a small amount of carving. It stands upon 1,080 square yards of land and has three frontages—namely, to Church Street, Edmund Street, and Barwick Street. It consists of four floors and a basement, the kitchen department being in the top storey. There are two stone staircases reaching from the main entrance to the top of the building, one passing through the side set apart for the male patients, and the other that of the female patients, and a third stone staircase leading from basement to the top storey. The out-patient department is entirely isolated from the rest of the building, the large waiting hall occupying the internal space on the ground floor is under its own roof, thus forming a large internal area to assist the lighting and ventilating of the upper floors. This waiting hall is arranged to accommodate about 250 patients daily. The hospital is arranged to accommodate beds for seventy patients, with ample cubical space per bed. Great attention has been paid to the sanitary arrangements, and the building has been furnished with a due regard to the comfort and convenience of the inmates. The building has been erected by Mr. William Robinson, builder, under the superintendence of Messrs. Payne & Talbot, architects.

**Marlborough.**—The College Chapel has been undergoing extensive alterations at the hands of Messrs. Bodley & Garner, architects, Gray's Inn, London. Messrs. Stephens & Bastow, of Bristol and London, obtained the contract to build an entirely new chancel and organ-chamber; remove the then existing roof, and raise the walls of the nave, extending the same one bay longer at the west end, with a porch and staircase up to the west gallery. During the progress of this work it was found that the old walls were of a most defective character, and not strong enough to carry the new roof, and it was therefore determined to take down the walls, and in rebuilding to widen the chapel three feet. The extreme length of the new chapel, from the apse end of the chancel to the west end-wall, will be 176 feet; the width of the nave will be 45 feet. The floor of the chapel will be laid with Stephens's registered wood-block flooring, as used in large hall and classrooms at Charterhouse Schools, Godalming; dining-room and

laundry, Wellington College; and reception-rooms, Heathermead, Berkeley. The clerk of works is Mr. Knight, and the cost of the contracts will be upwards of 20,000*l*.

**Rugby.**—The Hospital of St. Cross, the gift to the town of Rugby by Mr. and Mrs. R. H. Wood, of Penrhos House, has been opened. It is built of red bricks, with dressings of Bath stone, and has been designed by Mr. Henry Wilson, of Gray's Inn Square, London. Roughly described, the ground plan is that of a long rectangular block running east and west, with two large projecting blocks on the south, an arrangement which permits of the free circulation of air around every room in the hospital. The building is of three storeys height, and the ground floor is appropriated to the use of male patients, the house surgeon, and the matron; the first floor to that of female patients, while nurses and servants are provided for on the second floor. In the projecting blocks there are four principal wards, each intended for the accommodation of seven patients, and two smaller wards contain severally one and two beds. The builders were Messrs. J. Parnell and Son, of Rugby.

**Sheffield.**—A limited number of architects have been invited to submit plans in competition for a Wesleyan Sunday-school and mission-hall, on condition that the one who sent in the best plan should be employed in the erection of the buildings, and that each of the others should receive a fixed payment for preparing the design. An examination of the plans received has resulted in the selection of the one by Mr. C. J. Innocent, architect, 17 George Street, Sheffield, and the building is to be proceeded with immediately.

## GENERAL.

**M. Frania**, the marine painter, has died at Brussels. His studio was much frequented by English pupils.

**The Meissonier Exhibition** in the Rue de Sèze, Paris, will be kept open until August 15. It was originally proposed to close the gallery on July 24.

**Mr. P. D. Puech** has obtained the Grand Prix de Rome for Sculpture. Last year he obtained the "Premier second grand prix."

**St. Hilda's Abbey, Whitby**, was on Saturday visited by the York Architectural Association.

**A New Opera House**, to seat 2,200 persons, is to be erected in Chicago, at an estimated cost of 250,000 *dols*.

**The Birmingham Architectural Association**, on Saturday last, made an excursion to Wolverhampton, and visited the Fine Art Exhibition. Amongst those present were Messrs. Franklin Cross, O. Essex, F. W. F. Newton, H. H. McConnell, C. E. Bateman, and V. Scruton. The party afterwards visited St. Peter's Church and other buildings in the town.

**The Statue of Voltaire**, which was modelled by M. Caillé, is to be cast in bronze by M. M. Thiébaut, and erected on the Quai Malaquais, Paris. The pedestal will be designed by M. Formigé.

**M. Paul Haag**, the projector of a metropolitan railway for Paris, is to be appointed engineer in chief of roads and bridges in France.

**The Road Surveyors of Scotland** have formed an association for the consideration and discussion of all questions connected with road management. Mr. A. Stevenson, of Ayr, has been appointed secretary.

**The Tender of Messrs. Robert Neill & Son**, of Manchester, has been accepted on the recommendation of Mr. Henry Shelmerdine, architect, of Liverpool, by the directors of the Lancashire and Yorkshire Railway Company, for the new Exchange Station Buildings Hotel and offices, Tithebarn Street, Liverpool. The amount of the estimate is close upon 100,000*l*, and the work will be proceeded with at once.

**The Freehold House**, No. 63 Lincoln's Inn Fields, was purchased in 1758 for the sum of 1,721*l*, by Mr. Norton, a barrister, who afterwards became Speaker to the House of Commons, and subsequently the first Baron Grantley. It was put up to auction on Wednesday by Messrs. Driver & Co., of Whitehall, and realised the sum of 13,000*l*.

**The Island of Herm** was offered for sale on Tuesday at the Mart, Tokenhouse Yard, by Mr. Tewson, of the firm of Debenham, Tewson & Farmer. As the highest bidding was only 5,900*l*, it was announced that no sale would take place.

**The Congress** at Dublin of the Sanitary Institute will open on September 30, when an address will be delivered by Sir Robert Rawlinson. The presidents of the sections are Dr. Grimshaw, Mr. C. P. Cotton, C.E., and Dr. C. A. Cameron. Mr. T. Drew, R.H.A., is one of the honorary secretaries.

**The Improved Industrial Dwellings Company (Limited)** now possess 34 estates in various parts of the metropolis, on which 4,314 dwellings have been erected and are in occupation, and 656 are in course of erection, making a total of 4,970 tenements. When these are completed, the number of persons residing in the company's dwellings will be about 25,000. The expenditure on capital account has reached 866,281*l*.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, AUGUST 2, 1884.

### COMPETITIONS OPEN.

**NORTH SHIELDS.**—Aug. 18.—Plans are required for Alterations and Additions to the Workhouse. Mr. Christopher Scott, Guardians' Hall, North Shields.

**STOCKPORT.**—Sept. 15.—Designs are invited for Public Baths. Premiums of £50, £30, and £20. Mr. Walter Hyde, Town Clerk, Stockport.

### CONTRACTS OPEN.

**ABERDEEN.**—Aug. 11.—For Additions to Midmar Parish Church. Messrs. Matthews & Mackenzie, Architects, 255 Union Street, Aberdeen.

**ASHTON-UNDER-LYNE.**—Aug. 4.—For Building Two Semi-detached Villas, Fairfield, and Eight Houses, Ashton. Messrs. T. D. & J. Lindley, Architects, Ashton-under-Lyne.

**BELFAST.**—Aug. 14.—For Building School. Messrs. Young & Mackenzie, Architects, Donegall Square East, Belfast.

**BIRMINGHAM.**—Aug. 28.—For Erection of Kitchen and other Buildings at the Workhouse. Mr. W. H. Ward, Architect, Paradise Street, Birmingham.

**BURNLEY.**—For Building Loom Shed and Appurtenances. Messrs. Potts, Pickup & Dixon, Architects, Clegg Street, Oldham.

**CARDIFF.**—Aug. 8.—For Additions to Infectious Wards at the Workhouse. Messrs. James, Seward & Thomas, Architects, St. John Square, Cardiff.

**CLAPHAM.**—Aug. 6.—For Erection of Buildings, &c., at the Parish Yard. Mr. A. Corsellis, Clerk to the Wandsworth Board of Works, Battersea.

**CROYDON.**—Aug. 7.—For Building Swimming Bath and Works in connection, South Norwood. Mr. C. M. Elborough, Town Clerk, Croydon.

**DENTON.**—For Building Residence. Messrs. T. D. & J. Lindley, Architects, Ashton-under-Lyne.

**DROYLSDEN.**—Aug. 4.—For Building nine Cottages and Branch Store. Mr. F. Smith, Architect, Bridgewater Chambers, Brown Street, Manchester.

**DUNFERMLINE.**—Aug. 4.—For Building Dwelling-house on Farm of Stenhouse and other Works. Mr. Scobie, Architect, Dunfermline.

**GATESHEAD.**—Aug. 6.—For Additions to Stationery Stores. Mr. William Bell, Architect, Central Station, Newcastle-on-Tyne.

**HUDDERSFIELD.**—Aug. 6.—For Conversion of Premises into Shops and Offices. Messrs. John Kirk & Sons, Architects, Huddersfield.

**HUNSLLET.**—Aug. 7.—For Building twenty-two Houses. Mr. John E. Leak, Architect, Hunsllet.

**LANTRISANT.**—For Additions to Dinas Mixed Schools. Mr. J. J. Evans, Architect, Maesyrfrwd, Treorkey.

**LONGTON.**—Aug. 20.—For Building Relief, Vaccination, and other Offices. Mr. E. Scrivener, Architect, Howard Place, Hanley.

**LUCTON.**—Aug. 19.—For Additions to Foundation School. Mr. F. R. Kempson, Architect, Hereford.

**LYDD.**—Aug. 4.—For Building Wesleyan Chapel and School. Mr. Charles Bell, Architect, 9 New Broad Street, E.C.

**MACDUFF.**—Aug. 8.—For Building Town Hall. Messrs. Pirie & Clyne, Architects, 123½ Union Street, Aberdare.

**MEXBRO.**—Aug. 4.—For Construction of Ejector Station, Engine-house, Boiler-house, Chimney Stack, Subsidence Tanks, and other Works in connection with Sewage Scheme. Mr. G. White, C.E., Market Hall, Mexbro.

**NABURN.**—Aug. 6.—For Erection of Villa Residence and Farm Buildings. Mr. William Brown, Architect, City Chambers, Clifford Street, York.

**NEW BRIGHTON.**—Aug. 7.—For Building Shelter-houses and other Works at Landing Stage. Mr. A. Dowson, C.E., 3 Great Queen Street, Westminster.

**NEWPORT.**—Aug. 4.—For Additions to Board Schools. Messrs. W. G. Habershon & Fawckner, Architects, Park Square, Newport, Mon.

**NORTHAMPTON.**—For Additions to Malt Kiln, &c., Woburn Sands. Messrs. H. Stopes & Co., Architects, 24A Southwark Street, S.E.

**SHEFFIELD.**—Aug. 5.—For Rebuilding Shops and Premises. Messrs. Flockton & Gibbs, Architects, 15 St. James's Row, Sheffield.

**SOUTHAMPTON.**—For Erecting Stone Wall, Iron Railing, &c., for Extension of Cemetery. Mr. W. B. G. Bennett, Borough Surveyor, Southampton.

**STRETTFORD.**—Aug. 5.—For Building Cemetery Chapel and Registrar's House. Messrs. Bellamy & Hardy, Architects, Lincoln.

**SWADLINCOTE.**—Aug. 9.—For Extension of Market Hall Premises. Mr. James Nixon, Architect, Church Gresley.

**THORNTON.**—Aug. 6.—For Additions to Schools, Thornton and Denholme. Mr. John Drake, Architect, Queensbury, near Bradford.

**TYLORSTOWN.**—Aug. 11.—For Building Methodist Chapel. Rev. W. Jones, Ton Ystrad.

**WELLINGBOROUGH.**—Aug. 4.—For Construction of Gas-holder Tank. Mr. S. H. Kimbell, Secretary to the Gas-light Company, Wellingborough.

**WIMBLEDON.**—Aug. 26.—For Building Press House, Cake

Shed, and Plant for Treatment of Sewage Sludge. Mr. W. H. Whitfield, Local Board Offices, Broadway, Wimbledon.

**WOODFORD WELLS.**—Aug. 6.—For Extension of All Saints' Church. Mr. E. Egan, Architect, Loughton.

**WYKE.**—Aug. 12.—For Erection of Coastguard Buildings. Director of Works Department, Admiralty, Whitehall.

### TENDERS.

#### BARNES.

For Repairs to School Board Schools, Barnes, S.W. Mr. FRANK E. THICKE, Architect.

Hunt	£154	0	0
Alchin	139	10	0
Sale	134	5	6
Stansby	133	15	0
HILL (accepted)	116	5	0

#### CARLISLE.

For Joiners' Work required in the Erection of Stables, Wagon and Van Sheds, &c., Caldewgate. Carlisle, for Messrs. Carr & Co., Biscuit Manufacturers. Mr. T. TAYLOR SCOTT, Architect.

Latimer	£1,390	15	0
Batey & Forster	1,226	0	0
Scott	1,197	8	0
W. Court	1,172	0	0
H. & R. COURT (accepted)	1,170	0	0

#### CLIFTON.

For the Re-seating of Clifton Parish Church. Mr. J. C. MONCRIEFF, A.R.I.B.A., Architect, 23 Nicholas Street, Bristol.

	Pitch Pine.	Oak.
Smith & Co.	£1,377 0 0	£1,937 0 0
Davis	985 0 0	2,080 0 0
Williams	924 0 0	1,284 0 0
Hatherly	864 0 0	1,556 0 0
Perkins	820 0 0	—
Stephens & Bastow	820 0 0	1,068 0 0
Harris	770 0 0	925 0 0
Pugsley	755 0 0	1,500 0 0
Brock & Bruce	670 0 0	1,320 0 0
Bastow	650 0 0	—
Lewis	600 0 0	1,040 0 0
Griffiths	435 0 0	703 0 0

#### GRAVESEND.

For Building Board School, Milton Road, Gravesend.

##### Revised Tenders.

Tuffee, Gravesend	£4,060	0	0
Pickershill, Soho	3,990	0	0
Wallis Bros., Gravesend	3,920	0	0
Senger, The Grove	3,890	0	0
Humphrey, Sutton	3,775	0	0
NIGHTINGALE, Gravesend (accepted)	3,695	0	0

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

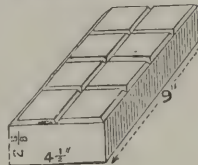
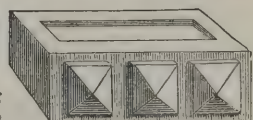
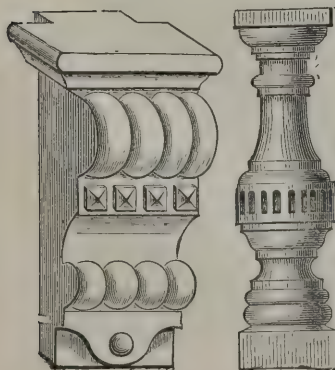
TO ARCHITECTS.—THE BRICK of the FUTURE, that shall not get dingy or sooty like other Bricks, but, being of a Semi-Vitreous nature, will maintain a clean and washable surface.

## FACING BRICKS AND BRICK ORNAMENT OF TRUE TERRA-COTTA, AS ALSO ARCHITECTURAL WORK, IN WHITE AND WARM-TINTED BUFF.

Made from the Finest Terra-cotta and Stoneware Clays, of a warm and pleasing appearance, of beautiful and superior quality and finish, non-absorbent, acid, fire, and alkali proof, will resist the most severe frosts, and when tested were found to withstand a pressure of 445 tons to the square foot. They have been used in the most exposed parts on the North and South Coasts, and being true Terra-cotta, are warranted imperishable.

Pattern Sheets and Price Lists of superior Glazed Stoneware Sanitary Pipes, and Fire Clay Goods, Chimney Tops, &c., on application.

Sole Manufacturers—CANDY & CO., Limited, GREAT WESTERN POTTERIES, NEWTON ABBOT, AND 11 QUEEN VICTORIA STREET, LONDON, E.C. Who are also Sole Makers of the celebrated "Granite Vitrified" Paving Bricks for Yards, Stables, and Footpaths, and "Granite Vitrified" Damp-proof Building Bricks, as used by H.M. Government for dock construction, &c. Samples free to Architects and Engineers.





**HALDEN.**

For Building Wesleyan Chapel, Halden, Kent. Mr. JAMES WYER, F.R.I.B.A., Architect, 9 Victoria Chambers, Westminster, S.W. Quantities by Mr. C. G. Maylard, 21 King William Street, Strand, W.C. BINGHAM, Headcorn (accepted) . . . £496 15 3

**HARRINGTON.**

For Building Wesleyan Chapel with School-room, Class-rooms, and other Offices, Harrington. Messrs. SCOTT & MURRAY, Architects, Victoria Buildings, Workington.

*Accepted Tenders.*

Ferguson, Workington, mason-work . . . £680 0 0  
Simon, Harrington, joiner-work (without upholstery) . . . 300 0 0  
Pratt, Harrington, painting and glazing . . . 90 0 0  
Blacklock, Harrington, plastering . . . 85 0 0  
Mandle, Maryport, slating . . . 72 0 0  
Whittle & Son, Workington, ironmongery . . . 52 0 0  
Walker, Workington, plumbing . . . 48 5 0

Total . . . £1,327 5 0

**HAWICK.**

For Erection of Municipal Buildings, Free Library, and Public Hall, Hawick. Mr. JAMES CAMPBELL WALKER, Architect, 2 N.E. Circus Place, Edinburgh. Quantities by Messrs. Lorimer & Fairbairn, Edinburgh.

*Accepted Tenders.*

Marshall & Sons, mason-work . . . £4,343 0 0  
Ingles & Sons, carpenter and joiner . . . 2,450 0 0  
Davidson & Son, plastering . . . 430 0 0  
Murray, plumber . . . 293 5 0  
Murray, slater . . . 254 18 0  
Guthrie & Son, gas-pipes . . . 84 0 0  
Concrete floors and stairs, tile floors, tiles on walls, heating, sun lights, ventilation, lightning-conductor, bells, speaking tubes, seats in Burgh Court, painting outside woodwork of spire, safe, iron door, &c. . . 933 10 0

Total . . . £8,878 13 0

Architect's estimate, £9,000

**HITCHIN.**

For Building Lock-up, &c., at Hitchin. Mr. URBAN A. SMITH, County Surveyor, Hertford. Quantities by Mr. Alfred Burr.

Twelvevrees, Biggleswade . . . £6,060 0 0  
Glascock & Son, Bishop Stortford . . . 6,020 0 0  
Stanleth. Hitchin . . . 5,765 0 0  
Hicks, Peterboro' . . . 5,725 0 0  
Turner, Watford . . . 5,397 0 0  
Gray, Hertford Heath . . . 5,200 0 0  
Bunting, Penstanton . . . 5,100 0 0  
Redhouse, Stotfold . . . 5,010 0 0  
Ranson, Arlesey Siding . . . 4,998 0 0

**LIVERPOOL.**

For Heating Hall and Dining-room, also Conservatory, for Mr. N. Davies, Whitechurch.

RENTON GIBBS, Liverpool (accepted).

For the Heating of Bidston Parish Church, Cheshire.

RENTON GIBBS (accepted).

**LONDON.**

For Alterations to the Cock and Woolpack, Finch Lane, E.C., for Mr. C. Deakin. Mr. ARTHUR W. SAVILLE, Architect, 99 Strand, W.C. ROYAL (accepted) . . . £559 0 0

For New Dome at the Town Hall, Hackney. Mr. THORNTON GREEN, Architect.

Sargeant . . . £172 0 0  
SHURMUR (accepted) . . . 165 0 0

For Erection of Parish-room at West Hackney Church. Mr. H. H. STATHAM, Architect.

Marcy . . . £888 0 0  
SHURMUR (accepted) . . . 774 0 0

For Alterations, &c., at The Holy Well, Shoreditch. Messrs. HOVENDEN, HEATH & BERRIDGE, Surveyors.

Shurmur . . . £387 0 0  
Pritchard . . . 319 0 0  
Hearle & Son . . . 315 0 0

For Erection of Residence and Studios at Chelsea. Messrs. BAILEY DENYON, SON & NORTH, Architects. Quantities by Mr. A. J. Bolton.

Richards . . . £3,789 0 0  
Bowden & Co. . . 8,700 0 0  
Chappell . . . 7,185 0 0  
Williams & Son . . . 7,070 0 0  
Staines & Son . . . 6,969 0 0  
Macey & Sons . . . 6,923 0 0

For Alterations to the King's Arms, Old Kent Road. Messrs. WILSON, SON & ALDWICKLE, Architects.

Lusk . . . £1,766 0 0  
Hearle & Son . . . 1,619 0 0  
Shurmur . . . 1,593 0 0  
Saines & Son . . . 1,593 0 0  
Drew & Cadman . . . 1,588 0 0  
Hancock . . . 1,533 0 0  
Mills . . . 1,495 0 0  
Jackson & Todd . . . 1,470 0 0  
O. O. & A. Brown . . . 1,350 0 0

For Alterations and Repairs to 120 Tottenham Court Road, and 32 and 38 Grafton Street, W., for Mr. R. Etzensberger. Messrs. J. SAVILLE & SON, Architects, 1 Arceve Square, W.C. Quantities by Mr. Arthur W. Saville, 99 Strand, W.C.

Timas . . . £1,098 0 0  
Ward & Lambie . . . 1,073 0 0  
Smith . . . 989 0 0  
Spencer & Co. . . 980 0 0  
Perkins . . . 973 0 0  
Anley . . . 947 0 0  
Royal . . . 970 0 0  
Jackson & Todd . . . 895 0 0  
LAMBLE (accepted) . . . 890 0 0

**LONDON—continued.**

For Alterations, &c., at No. 20 Worship Street. Mr. J. GROOM, Architect.

Mattock Bros. . . . £858 0 0  
Saxby . . . 825 0 0  
Kilby & Co. . . . 736 0 0  
Shurmur . . . 693 0 0

For Erection of Methodist Free Church, Peckham. Mr. F. BOREHAM, Architect.

Grover . . . £5,342 0 0  
Reed . . . 5,954 0 0  
Richards . . . 5,243 0 0  
Williams & Son . . . 5,040 0 0  
Johnston . . . 4,992 0 0  
Smith & Sons . . . 4,987 0 0  
Shurmur . . . 4,896 0 0  
Gregar . . . 4,778 0 0  
Holloway Bros. . . . 4,655 0 0  
J. Holloway . . . 4,630 0 0  
Allen . . . 4,400 0 0

For Rebuilding the Ship Tavern, Little Tower Street, E.C. Messrs. HILL & FLETCHER, Architects.

Rider & Son . . . £2,984 0 0  
Higgs & Hill . . . 2,940 0 0  
Scrivener & Co. . . . 2,890 0 0  
Wall Bros. . . . 2,828 0 0  
Longmire & Burge . . . 2,773 0 0  
Boyce . . . 2,733 0 0  
Shurmur . . . 2,583 0 0  
Cocks & Co. . . . 2,580 0 0  
Harris & Wardrop . . . 2,572 0 0  
Nightingale . . . 2,520 0 0  
Perry & Co. . . . 2,500 0 0  
Salt . . . 2,500 0 0  
Alexander . . . 2,285 0 0

For Erection of New Hall and Offices for the Butchers' Company, in Bartholomew Close, City. Mr. ALEXANDER PEEBLES, F.R.I.B.A., F.S.I., Architect. Quantities by Mr. W. R. Storor, Bucklersbury.

		Alternative Works.
Conder	£8,282 0 0	£1,867 0 0
F. & P. J. Wood	8,458 0 0	1,581 19 4
Lawrance	8,067 0 0	1,621 0 0
Morter	7,963 0 0	1,711 0 0
Hall, Beddall	7,997 0 0	1,625 0 0
Brown, Son, & Blomfield	7,939 0 0	1,592 0 0
Chappell	7,965 0 0	1,562 0 0
Coils	7,886 0 0	1,565 0 0
Kilby & Gayford	7,836 0 0	1,578 0 0
Brass	7,777 0 0	1,547 0 0
Ashby & Horner	7,755 0 0	1,547 0 0
Greenwood	7,881 0 0	1,407 0 0
Clarke & Bracey	7,665 0 0	1,533 0 0
Nightingale	7,658 0 0	1,385 0 0
Architect's Estimate	8,000 0 0	Not estimated

For Erection of Board School, Wandsworth Lane. Mr. E. R. ROBSON, Architect.

Lathey Bros. . . . £10,857 0 0  
Smith & Sons . . . 10,701 0 0  
Perry & Co. . . . 10,615 0 0  
Priestley & Gurney . . . 10,497 0 0  
Bangs & Co. . . . 10,480 0 0  
Jerrard . . . 10,440 0 0  
Turtle & Appleton . . . 10,298 0 0  
Grover . . . 10,232 0 0  
Hobson . . . 10,216 0 0  
Bart . . . 10,212 0 0  
Downs . . . 10,049 0 0  
Holloway . . . 9,998 0 0  
Stimpson & Co. . . . 9,986 0 0  
Patman & Fotheringham . . . 9,974 0 0  
Wall Bros. . . . 9,904 0 0  
Wall . . . 9,829 0 0

For Erection of Board School, Montem Street. Mr. E. R. ROBSON, Architect.

Goodman . . . £17,983 0 0  
Patman & Fotheringham . . . 17,878 0 0  
Kirk & Randall . . . 17,774 0 0  
Downs . . . 17,707 0 0  
Grover . . . 17,338 0 0  
Shurmur . . . 16,560 0 0  
Stimpson & Co. . . . 16,524 0 0  
Wall . . . 16,429 0 0  
Priestley & Gurney . . . 16,393 0 0  
Bangs & Co. . . . 16,337 0 0  
Niblett . . . 16,299 0 0  
Jerrard . . . 16,107 0 0  
Wall Bros. . . . 15,994 0 0  
Atherton & Latta . . . 15,990 0 0

For Erection of Board School, Haseltine Road. Mr. E. R. ROBSON, Architect.

Kirk & Randall . . . £10,236 0 0  
Downs . . . 10,118 0 0  
Priestley & Gurney . . . 10,100 0 0  
Holloway . . . 10,083 0 0  
Patman & Fotheringham . . . 10,069 0 0  
Wall Bros. . . . 10,066 0 0  
Bangs & Co. . . . 10,040 0 0  
Lathey Bros. . . . 10,037 0 0  
Grover . . . 10,012 0 0  
Pritchard . . . 1,000 0 0  
Wall . . . 9,990 0 0  
Jerrard . . . 9,843 0 0  
Tongue . . . 9,707 0 0  
Stimpson & Co. . . . 9,673 0 0

For Enlargement of Board School, Wright's Road. Mr. E. R. ROBSON, Architect.

Bangs & Co. . . . £12,606 0 0  
Priestley & Gurney . . . 12,516 0 0  
Shurmur . . . 12,278 0 0  
Pritchard . . . 12,203 0 0  
Perry & Co. . . . 12,186 0 0  
Cox . . . 12,174 0 0  
Patman & Fotheringham . . . 12,125 0 0  
Hunt . . . 12,058 0 0  
Wall Bros. . . . 12,021 0 0  
F. & P. J. Wood . . . 11,993 0 0  
Jerrard . . . 11,983 0 0  
Grover . . . 11,927 0 0  
Stimpson & Co. . . . 11,920 0 0  
Wall . . . 11,851 0 0  
Atherton & Latta . . . 11,500 0 0

**LONDON—continued.**

For Covered Playgrounds to Board Schools.

*Yerbury Road.*  
Wall Bros. . . . £293 0 0  
Lowes . . . 282 0 0  
Riley Bros. . . . 235 0 0

*Lombard Wall.*  
Holden & Co. . . . 330 0 0  
Ewart & Son . . . 296 15 0  
Jerrard . . . 243 0 0

*Deptford Lower Road.*  
Holden & Co. . . . 278 0 0  
Atherton & Latta . . . 267 0 0  
Ewart & Son . . . 243 10 0

*Plassy Road.*  
Slater & Owen . . . 384 0 0  
Kirk & Randall . . . 360 0 0

*Cranford Street.*  
Downs . . . 339 0 0  
Holden & Co. . . . 335 0 0  
Ewart & Son . . . 297 0 0

*New Road.*  
Slater & Owen . . . 178 10 0  
Atherton & Latta . . . 130 0 0

*Adys Road.*  
Ewart & Son . . . 247 0 0  
Jerrard . . . 228 0 0  
Riley Bros. . . . 205 0 0

*Burghley Road.*  
Wall Bros. . . . 198 0 0  
Lowes . . . 183 0 0  
Riley Bros. . . . 166 0 0

*Nalley Street.*  
Lowes . . . 202 0 0  
Ewart & Son . . . 194 10 0  
Wall Bros. . . . 194 0 0

*Halford Street.*  
Lowes . . . 105 10 0  
Ewart & Son . . . 99 15 0  
Holden & Co. . . . 95 0 0

*Bells Street.*  
Slater & Owen . . . 135 0 0  
SHURMUR (accepted) . . . 135 0 0

*St. Leonard's Road.*  
Lowes . . . 266 0 0  
Atherton & Latta . . . 255 0 0  
Riley Bros. . . . 205 0 0

The Erection of Board School, Trafalgar Square, Stepney. Mr. E. R. ROBSON, Architect, is to be commenced. A full list of tenders for the work will be found in *The Architect* of Feb. 2.

**MAIDSTONE.**

For Additions to Ophthalmic Hospital, Maidstone. Mr. E. W. STEPHENS, F.R.I.B.A., Architect, Maidstone.

Wallis & Clements . . . £1,170 0 0  
Slade . . . 1,149 0 0  
Vaughan . . . 1,137 0 0  
Haslip . . . 1,098 0 0  
Avar . . . 1,085 0 0  
Barden . . . 1,084 10 0  
WILKINS (accepted) . . . 1,017 0 0

**SHEERNESS.**

For Additions to Britannia Hotel, Sheerness-on-Sea. Messrs. JEFFERY & SKILLER, Architects, Hastings.

England, Sheerness . . . £1,500 0 0  
Mower, Hackney . . . 1,496 0 0  
Stephenson, Hampstead . . . 1,485 0 0  
Scharien & Williams, South Kensington . . . 1,468 0 0  
Foad, Whitstable . . . 1,454 0 0  
White, Shepherd's Bush . . . 1,350 0 0  
Houghton, London . . . 1,316 19 0  
Wood & Co., Merton . . . 1,331 0 0

**ST. ALBANS.**

For Erection of Bridge at Park Street, near St. Albans. Mr. URBAN A. SMITH, County Surveyor, Hertford.

Boff Bros., Park Street . . . £500 0 0  
Gray, Hertford Heath . . . 450 0 0  
Miskin, St. Albans . . . 430 0 0  
Cooke & Co., Battersea . . . 428 0 0  
Turner, Watford . . . 399 0 0  
Homer & Co., Holborn . . . 374 0 0  
Redhouse, Stotfold . . . 358 0 0  
HOMER & Co., amended (accepted) . . . 350 0 0

**STONE.**

For the Erection of a New Chancel, &c., at Christ Church, Stone, Staffordshire. Mr. W. HAWLEY LLOYD, Architect, 79 Colmore Row, Birmingham.

Bradbury, Stoke-on-Trent . . . £1,899 0 0  
H. & R. Inskip, Loughton . . . 1,394 0 0  
Trow & Sons, Wellesbury . . . 1,320 0 0  
Collis, Loughton . . . 1,238 0 0  
G. dilmire, Newcastle . . . 1,193 0 0  
LOWE & SONS, Burton (accepted) . . . 1,160 0 0

**TEMPLE COWLEY.**

For Addition of Infant School and Offices to present School Chapel, Temple Cowley, Oxford. Mr. A. MARDON MOWBRAY, F.R.I.B.A., Architect, Eastbourne.

Stroud, Littlemore . . . £784 0 0  
Castle & Martin, Oxford . . . 777 0 0  
Horn, Oxford . . . 656 10 0  
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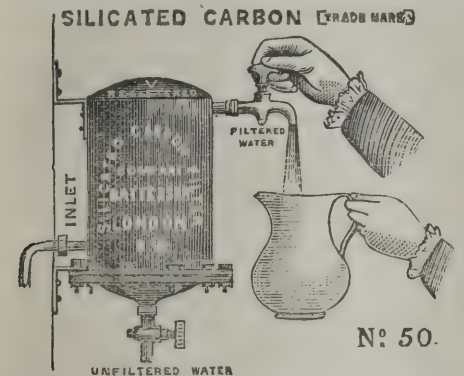
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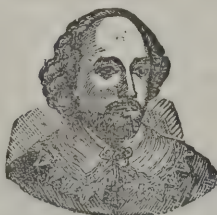
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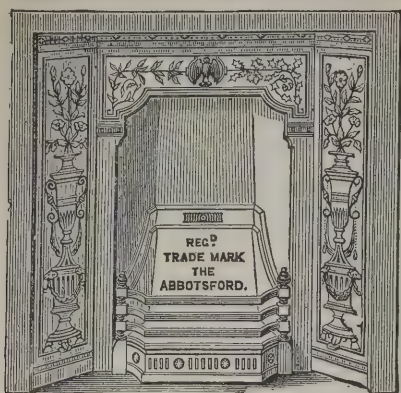
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IN a great architectural competition such as that which has just been decided, the public interest does not cease when the decision is attained; in some respects it only begins. The personal question of success is not a public one at all. Nor is the question whether the best man wins a public one; although indirectly it may have important bearings upon future practice, yet for the moment it is but part of the narrow issue who shall gather the gains. When the competition itself, so to speak, is at an end altogether, its artistic elements remain, in another capacity, as public, no longer private, property, the property of criticism, and, if worthy, of history.

Having regard to the magnitude of the building, the high character of its purpose, the favourable nature of the site in some degree, and the dignified way in which the proceedings have been conducted, the Government Offices Competition of 1884 cannot but be recognised as one of the most important contests of the kind that have taken place in this country; and what we now have before us is a very considerable collection of designs—the best that the profession can produce—namely, nine fully worked out in detail, and as many as 119 others in the almost equally serviceable form of sketches. The smaller number are already on exhibition to the public, and the best of the larger number, we hope, will in one way or another soon be in like manner submitted to that general inspection as works of honour which, after all, is the supreme reward for the exertions of the competitors as a body.

One very material advantage which is exhibited in Government competitions of high class is that the embarrassing restriction of expenditure is not introduced. Commercially there is no doubt a good deal that may be said about the necessity for defining the cost. It is otherwise to be supposed that one competitor may sail away boldly into the ocean of extravagance, while another conscientiously hugs the coast of common sense and is lost in the shadows and shallows of modesty. In some cases there may be a substantial difficulty here—which we do not care just now to dwell upon; but when the Town Council of Glasgow, for example, made so very much of it as they did, there are many shrewd observers who will be disposed to say, now that we have all had time to think it over, that they virtually shipwrecked their enterprise by throwing round it the trammels of needless and illusory illiberality. The same may be said of the case of the Dublin Museum, in which at this moment the last “successful competitor” finds himself in the provoking condition of being wholly thrown over by the estimating surveyors, and some of the next in order of selection in the almost equally unenviable position of being only the next in order for the same sordid trial. In fact a competitor in such a case is sometimes harassed to that degree by what may positively be called a fear of punishment—the punishment of annihilation for the offence of not being able to meet an arbitrary demand of price—that his design gives so little satisfaction to himself as to induce no hope of its giving much to anyone else. In the present case, therefore, there has been at any rate none of this pettifogging element for the competitors to contend against.

A consideration in the other direction which has already been a good deal discussed, although upon necessarily indefinite ground, is the allegation that many of the most meritorious designs, artistically regarded, amongst the number of 128 sketches first sent in, were set aside upon a certain test of internal arrangement, which, apart altogether from the personal interest of the rejected competitors, may have deprived the public of the opportunity of possessing in the end, after a little modification, anyone of half a dozen very superior examples of the building art. This may be so, and it is pretty well understood that some say it is so who ought to know; but such a misadventure has always been one of the hazards to be faced, and all we can say is that we hope the public will see these

rejected designs in all their honour now, and so be enabled to bestow upon them all the praise they deserve, and upon their authors all the distinction. The crowning misfortune of the Glasgow competitors was that an exhibition of the designs was rudely discouraged, and as far as possible prohibited, by the parochial personages to whose unwonted custody a great deal of refined architectural intelligence from all over the three kingdoms had been persuaded to commit its professional honour; and for this reason, except within the narrow limits of the town, this great and, to the profession of architects, very costly contest produced none of the good results that were expected to accrue to the competitors at large. As regards the history of architecture, the manifestation was simply smothered in local reek. But in the case now in hand, in the more generous metropolis, and under the control of the nobler authorities of Whitehall, we hope to find the utmost done to give historical effect to what is unquestionably a prominent effort for the good of the grand art concerned.

The question for the friends and students of architecture now to take into consideration, in comparing with each other, and with other similar products of the genius of the age, the fifty or sixty designs for the Offices of War and Admiralty which it is to be hoped may now come before the public is, beyond all others, this: At the present critical time, what is the direction in which the art is moving?

Now, leaving out of account, of course, all branches of ecclesiastical work, it may be accepted as a fact, so far, that what is loosely, sometimes very loosely, called Classic, is the new style whose development is to be looked for. How exceedingly loose such phraseology is—how difficult it is to say what Classic is really understood by the architectural multitude to be, or what it is desired to be—is a point that can be appreciated by very few, if we may judge by the everyday work to which the name is given; but it must have struck many of the more observant of ordinary students whose recollections are more than a very few years old, that the mode called Secular Gothic still exercises a potent secret influence over the best designers in England. It may even be said, and entirely without paradox, that this style had less influence in its own day than it has now. In other words, the artistic motive which, in the days of Mediæval detail, strove so hard to confer upon building what was thought to be a Mediæval character, now unconsciously remains in force, with Classic detail, or something like it, to divert the spirit of the art into a course that is quite uncongenial to Classic taste. Under this *régime* a few years ago, any façade of considerable extension came to be, although on the drawing-board a composition of many parts, in the reality of execution a mere flat wall upon which this composition was developed only in thin projections, without even the shadows of the paper drawing, with a turret or pinnacle, gable or gablet, thrown up against the sky of no more actual substantiality than perhaps the meagre sham buttresses and shallow breaks which formed the vertical lines. Under the new *régime*, it is only necessary to say the same thin principles still govern, and the only difference is that the genuine Mediævalists denounced the practice loudly enough, whereas the new Classicists do not yet appear to see how the fault, opposed as it was to the idea of Gothic, is much more opposed to the spirit of Classic.

The French have never fallen into this bad habit. Not only in sky-line, but in solid roof-masses, and, whenever the scale of building would allow, in equally substantial plan-masses, their composition is composition in the solid, and not in the mere flat at all. Their shadows of design are real shadows of building, and not conventional deceptions of etching. Their forms are real forms of building, and not anything represented anyhow to suit the paper purpose. Their Gothic, what little there is of it, has been as honest as this could make it, and their Classic has never been otherwise. True architecture, in a word, is a thing of the solid and not of the flat. It was one of the merits of STREET, for instance, that he saw this so very clearly; and when SCOTT was at his weakest, he forgot this the most.

Now, shutting one's eyes for the moment to all the detail of the designs at present on exhibition, and reserving himself with entire freedom for those others which he hopes to see likewise, what the student of the art has to ask himself is whether the new building is to be a design in the solid or one in the flat. If it is to be no better than the generality of the Glasgow designs—so many straight street walls, pierced with windows and doors, and manipulated into an apology for solid com-



position by means of half-attached columns as the height of luxury, pilasters meaning nothing and pediments meaning almost less, symmetrical breaks of a few inches in depth, turrets that might as well be chimneys, sham roofs, and sham towers stupendous from whose useless summits not even the voice of the muezzin calls to prayer nor a fire-bell tolls to call the engines, let him think earnestly as an artist, and say plainly as a man of business, whether this is worthy of the manly vigour of our island and our age. If, on the other hand, he can discover a design here and there amongst the rest in which the plan of masses on the ground and the grouping of masses above go hand in hand in the form of real solid architectural composition, which has an honest story to tell and tells it honestly for what it is worth, even if the result on paper may not be so attractive, let him think again whether a little of this kind of substantial virtue does not go infinitely further than any amount of showy paper counterfeits. We are emerging from the overwhelming ocean of sham into which English building fell in the Tudor and Elizabethan Renaissance. Compo is gone with blank windows and cast-iron ornaments; the mysteries of four oils and an adroit imitation are almost unknown to the rising generation; plaster groining, neatly lined in ashlar, our young Gothicists may think never existed; and certainly there are at this day cast-iron domes and even cast-iron spires in the United States, and elsewhere also, whose sublimity of sham English intelligence never reached. But England has a good deal to do in a hundred ways nevertheless, before we can hope to be able to say that our public buildings carry a surface of natural art upon a frame of natural science; and no opportunity ought to be lost for impressing this upon the professional mind. No adverse criticism by innuendo of any of the nine designs now on exhibition is for a moment intended in this argument; but all the more on that account may we leave the critical lesson they afford in the hands of those of our readers who are able to see the way of the next generation, if not the present, to assume in our admirable art the high position which alone is worthy of our country.

### GEOMETRIC ORNAMENT.

By LEWIS F. DAY.

THE necessity for a geometric basis of ornamental design has been so rigidly insisted upon by departmental authority that the student is like to be irritated into opposition: all dogma cuts two ways. In one important division of design geometry is inevitable. Wherever, that is to say, a pattern is repeated a number of times, a geometric succession of the parts becomes apparent; and where this consideration of geometric order has not been duly considered the result is often most disastrous. Suppose you commence without any idea of formal distribution, and merely design a scroll as graceful as may be—a series of such scrolls side by side will most likely show lines not in the least contemplated by the designer, and as inelegant as they are unexpected. So commonly is this the case, that it is really wisest to base your design upon some regular arrangement of lines which, if they should be apparent in the finished design, will at least be comely.

It is one of the strangest things in the experience of a designer to see the tricks his patterns will play him when repeated. A wall-paper design, for example, which appears to be so evenly distributed as to show no leading features of any kind, will prove, when hung, to run in lines slanting so as to give the impression that the walls are not true, or that the paper has been hung askew. It is not impossible, of course, however difficult, to design an absolutely free scroll that shall yet conform to all decorative conditions, even when repeated many times over. But one thing is imperative, namely, that the parts which appear to balance one another should do so absolutely. If, for example, a scroll is reversed, the two sides of it should take identically the same curve, and any two corresponding flowers should be exactly on the same level. The main lines and more important features thus balancing one another, we may take what liberty we like with details which do not assert themselves; and it is always a charm in a design to find variations showing that the pattern has not been just traced and reversed; but it is the little difference in level, or the slight departure from the perpendicular, where the eye expects mechanical accuracy, that is in most cases responsible for unfortunate lines in repeated surface patterns.

If the repeat of your pattern is small, you naturally get all the variety you can into it, knowing that repetition will bring with it quite enough of order and formality; but if you have a large space to cover, it is as well always, unless you wish it to present an absolutely uniform appearance, to settle points in it which shall be marked so as to form, as it were, links between the inevitable points which recurrence will reveal in the design.

As for ornament which is not merely based on geometric lines, but consists of geometric forms, it is very easy to have too much of it. Its most satisfactory use is perhaps to be found in mosaic, to which it seems naturally adapted, more especially where the colours are varied in an accidental manner, as is the case with marble and wood. Such accidental variation is, in fact, exactly what is necessary to geometric work. The unexpectedness of the tints just counteracts the certainty of the forms, and redeems the effect from mere mechanism. The very reverse of this fit relation of form to colour is seen in the ordinary encaustic tile work, which seems somehow to be always harsh and common, even when the colours employed are not in themselves absolutely crude. At all events they are never sufficiently varied—perhaps it is not in the nature of the manufacture that there should be much variety; in which case the look-out is hopeless. Certain glazed Moorish tile work of this kind is not free from harshness and even crudity. Yet we see in Italian Giottesque decoration, which is mainly, so far as its ornamental detail is concerned, in imitation of the forms of geometric inlay, that even in flat-painted work the colour can be subdued to a key so admirably in accord with mechanical forms that, literally, the only fault to be found with it lies in its pretence. Perhaps the charm is largely due to the fact that the forms are not precisely mechanical, but put in with some freedom, and even with a sketchiness that would horrify the British workman. Time, too, has doubtless been kind. Still, there is the happy result, which is not without its lesson for us.

By the way, in the ornamental glass mosaic of GIOTTO's time we get the very perfection of relation between geometric form and glowing colour. Nothing like harshness of form is possible with these little facets of glass, which catch the light at all manner of angles, and glitter according to their own bright will.

Lines of a more or less geometric character are so useful in ornamental design that one is bound to avail oneself of them. But there is always a danger in using them, lest they should assert themselves unduly. What admirable use GROLIER, for example, made of them; yet there are many of his bindings in which they stand too emphatically pronounced.

One has noticed in many an instance of old stained glass and painted decoration the satisfactory result of a portion of the design being worn away, or nearly so, hinting to us that it is not absolutely necessary that geometric forms should stand confessed in all their naked severity. It is quite possible, and quite permissible, to subdue, if not to obliterate them here and there, so that the logical cohesion of the design exists, without the obvious stiffness which results from the preponderance of geometric forms.

There is a way of relieving the monotony of geometric design, used in Byzantine art (one sees it at Ravenna), by interspersing sprigs of very conventional foliage in the midst of interlaced strap work, which is very charming. But in Byzantine art this is scarcely necessary; so little mechanical are the forms that they are scarcely to be called geometric.

Some sort of geometric basis to a design gives scale, severity, and strength to it, so that, apart from any necessity there may be for repetition (which, of course, involves recurrence of the parts in geometric order), we habitually adopt it as an element almost indispensable in design.

The point to which geometric design has been carried by the Arabs is something really marvellous. Not so marvellous as it at first appears, for it seems at first as if human ingenuity could never so much as grasp the thread of such intricate pattern-work, much less invent it—yet still sufficiently bewildering, even when one is familiar with the, after all, simple lines on which it is constructed. But even in such work as this, where geometric design certainly reaches its zenith, one cannot escape a certain weariness of interlacing lines and parts repeated; and a certain amount of wear and tear, and even of dilapidation, is a relief to the eye. I have always found the greatest pleasure in examples that, whether by design or accident, are not altogether mechanical in execution.

This brings me to the conclusion which has pressed itself



upon my conviction, that it is the geometric distribution of ornament which is valuable, whilst geometric accuracy of execution is not merely worthless but fatal to ornament. Why is it that modern Gothic tracery is apt to be so hideously hard compared to the old examples from which it is copied? Simply that it is what the builder calls "true," which the old work is not, and probably never was. Even in old work, whose edges have been softened by time, what a relief it is to get away from the evidence of mechanism. In German geometric tracery one is conscious of the part played by the compasses in the design; and in English Perpendicular work there is always a suggestion of the T square; but in French Flamboyant forms one sees only the artist. There is a geometric relation of the parts, but the lines flow freely from the hand of the designer.

Great importance has sometimes been attached to the construction of ornament, not only on a geometric basis, but upon the principle of the multiplication of one simple unit throughout. It is quite true that a great deal of Arab and Moresque pattern work is reducible, for all its intricacy, to the simplest possible elements; and that star shapes, diamond forms, hexagons, and other polygons, are all multiples of the simple triangle upon which this particular variety of Eastern design appears to be built up. But I am not so certain that it is altogether a building process with the Oriental designer. When you come to deal with absolutely geometric shapes, the subdivision of such shapes into similar geometric divisions is almost a natural instinct, with anyone whose ingenuity lies at all in the direction of such art. The space to be ornamented suggests, in fact, its being broken up into segments of like shape. The square, for example, suggests a smaller square set anglewise within it, and the resulting triangles at the corners suggest, again, a triangle placed in the same way in its centre, dividing the space into four equal equilateral triangles. Whether, however, the design be the result of a process of multiplication or division of parts, matters little; except that too much stress has been laid, I think, upon this constructive form of design. No doubt the construction is there; and there is significance in the fact. But I fancy that the Mohammedan artists were not always thinking of the principle underlying their work, even if they were always conscious of it. Their art was traditional and instinctive to a degree. And, anyway, I disbelieve entirely in the advisability, and even in the possibility, of our designing on any such scientific principles as may doubtless be discovered in Alhambresque design. It is possible, very likely, mathematically to reconstruct the subtlest curves of Greek architecture; but does anyone imagine that they are the outcome of mathematical science? A scientist perhaps! I have heard such an one enthusiastic in the anticipation of a time when colour shall be reduced to a matter of mathematical certainty—in which case it will be about as interesting as a game of chess where, one move made, the rest follow as if the human machines engaged in it had been wound up. Art proceeds, happily, upon quite different lines. And though the results of art may be scientifically explained perhaps, the effects of art are not to be scientifically produced.

## STUDIOS IN ROME.—SENOR R. VILLEGAS'.

[BY A CORRESPONDENT.]

ALTHOUGH Rome includes the studios of many accomplished painters of various nationalities, it cannot be recommended as the best place for the education of a young artist, for the reason that most of the schools represented have assumed their final and completed condition and are not in a state of progress. They do not suggest advancement, but satisfaction with an acquired faculty; a resting in the present stage rather than an ambitious desire for new conquests, and the development of higher powers. In this respect the art condition of Rome differs from that of England; for we have there manifested from time to time perceptible evidences of a desire towards elevation and extension; and although this effort too often mistakes its proper object in the attempt to get a more bold literalism, to surpass in merely copying the forms of nature instead of seeking to express a creative individuality in the work done, it at least suggests to the student that something more remains to be attained beyond that which is accomplished. Perhaps it is this very quality of a want of finality—its not being frozen or crystallised, so to speak—that is the

most hopeful feature in English art, as it, indeed, constitutes one of its charms. It is a characteristic notable from early times. REYNOLDS and TURNER were constantly making experiments, both conceptional and manipulative. Their failures even are valuable, because they offer suggestions, break down the barriers of convention, introduce freedom of method, and illustrate new points of view. The kind of art, however, to which I purpose to call the reader's attention in this paper does not belong to this category. It is not experimental at all. As it is complete in itself, it suggests nothing further: as the desire and ambition of the manipulator are satisfied, it indicates nothing beyond itself. It is emphatically the art of the senses, appealing to the eye and to the taste rather than to the soul and the higher æsthetic faculties. A ROSSETTI or a WATTS would be as impossible in the modern art of the Latin races as a FORTUNY or a VILLEGAS would be in our own.\*

And yet, regarding the means of work, the executive ability which goes straight to its object of representation with its distinctive individuality of form, its sparkle, its glitter—those qualities which give special character to every object in a pictorial relationship—the southern schools certainly surpass those of the north. But then it is only the external character which is given: the "nothing more" but the "primrose." One holds no mental association with the objects thus represented. They appeal to the eye with surprising force, but somehow or other they seem to have no connection with the inward faculty. They touch no emotional link, they excite no profound sentiment. They are a wonder to the outward sense, but never penetrate the soul, never reach the region where they come to be an influential element of the mental and moral nature.

These remarks are illustrated in the works of one of the most deservedly famous artists of this school, Señor VILLEGAS, a Spanish painter established in Rome. We will pass some of his more important works specially under review.

The largest and most important picture at present in his studio (it measures 6 by 4 mètres) is taken from Venetian history. It is entitled "*The Triumph of Foscari*," and represents the ceremonial of his accession to the office of doge. He stands in the foreground clothed in the official robes. Behind is a group of senators. A canopy is held over his head. A procession of damsels, in the centre of which is his wife, descends the crimson-covered steps presumably to enter the bucentaur, or state barge, for the purpose of going through the ceremony of "marrying the sea." Trumpeters, attendants, ambassadors, and other official persons make up an imposing pageant, all rendered broadly and clearly in the diffused light of a clear atmosphere.

Another important work scarcely less in size is "*The Death of the Bull-fighter*." For this picture a number of preparatory studies have been made, and a smaller well-finished painting has been produced. The subject is a dramatic one. A bull-fighter, who has been worsted in the combat, is brought into the chapel attached to the arena. He is laid upon a bier in front of the altar, clothed in a white shirt, his feet covered with a scarlet cloak, his countenance fixed in the rigid pallors of death. A priest stands at his head, reading the office; a lighted candle is placed at his feet. A group of male figures stand around in various attitudes expressive of reverence, concern, or curiosity. They are said to be all of them portraits of celebrated bull-fighters. Written upon their countenances one seems to discern the physical and moral hardness of their trade. Two municipal guards in the background discuss the tragedy. At the left some servants of the ring carry the weapons and clothes of the victim. A glimpse of the sun-lighted arena is seen through the door of the chapel. The whole picture is conceived with the force of a reality, and could only have been painted by one familiar with the scene it portrays. The larger picture, which is barely laid in on an unprepared canvas, is a marvel of dexterous manipulation and robust grasp of the subject. The firm and spirited drawing of the figures, the masterly indication of the accessories, the textures and qualities of the various objects and garments, all bear witness to the vigorous ability of the artist.

Another striking and remarkable picture is that of a grave-digger in a cemetery studded with crosses and other symbols of the dead, digging a grave in the twilight of a summer's evening. One streak of orange light lies on the horizon at the

\* These remarks as well as some of those which follow, are, it is needless to say, only partially applicable to the works of the French School.



bottom of a grey sky ; fire-flies flit through the gloom. By the side of the grave an unclothed corpse lies imperfectly covered by a single sheet, wan and ghostly in the glimmering light. The grave-digger pauses from his work, turning to look at the procession of a well appointed funeral which comes along an adjacent alley of cypresses. The intention of the picture supposably lies in the contrast between the two modes of burial.

In the same grim category may be placed another of the works of this painter. It is entitled *The Last Kiss*. Two covered corpses lie at a doorway in a Turkish house or palace, near which is a pool of blood. A stained sword is laid across the corpses. A censer smokes in the foreground, a pair of slippers being left near it. Hung by the hair on the framework of a wrought-iron lamp a male and a female head are suspended, their ghastly lips meeting in the pale kiss of death.

Besides these we have a sketch of a Venetian fête on the Grand Canal ; an occasion with which most visitors to that city are acquainted. The gondolas are decked in foliage, suspended with coloured lamps. A round moon rises on the horizon. Another elaborated sketch gives us the interior of *Madrid Cathedral*, in which a baptism is taking place. It is painted with that mixture of lightness of touch and attention to detail which distinguishes the work of FORTUNY representing a ceremonial taking place in the same building.

M. VILLEGAS has also some fine examples in water-colour, though it is evident he does not choose this medium for the elaboration of his more complex fancies. One represents the doge, FOSCARI, having been compelled to condemn his own son to torture and banishment for the crime of murder, which it ultimately turned out he had not committed. The doge sits in the judgment chair, holding the arms of it with a spasmodic grasp as the council leaves his presence. The story is pathetically retold, by the way, in ROGERS' "Italy." Another very clever water-colour is the half-length figure of a Venetian advocate clothed in scarlet with a head-dress of the same colour, reading a document with a seal attached. His head is thrown back to catch the light, or that he may glance at the effect of his utterance upon his auditory. It is spirited and artistic in treatment.

Besides these we have a large number of minor sketches and studies, some of them small but all touched in with a rare facility. Most elaborate pieces of ornament or architecture are rendered with a justness of line and artistic sentiment of colour often little less than wonderful, in which the full play of the distinctive qualities of this school of painting are clearly seen. Figures whose movement and spirit appear to have flung themselves on the canvas or panel without an apparent effort, live under the touch and move in the freedom of life. The minutest detail seems to come as naturally as the general broad forms, and to be done with the greatest ease and certainty.

In the foregoing description of pictures the preponderance of ghastly subjects cannot fail to have struck the reader : the deliberate choice of circumstances of horror or crime. Why this should be the case with a people who have the reputation of being more light-hearted than ourselves it is hard to say. There are certainly no precedents for it in the earlier schools of Spain and Italy ; at least not as a ruling sentiment, and never at all in the best epochs. Is it that a conscious diminution of power in the higher regions of art, as an expression of the most elevated emotion, has induced the false substitute of exciting and catastrophic events for that lofty artistic faculty which naturally dealt in a grand manner even with unheroic themes ? or is it that a moral depreciation in regarding things has succeeded those noble schools ? However it be it is to be deplored. What can be the satisfaction to any healthily-constituted mind, to see these horrors continually served up before it in a world containing so much of what is beautiful and wholesome, morally and materially ; to have deliberate choice made of its most distressing or disgusting situations, and these set before us to give us pleasure ? Not here, certainly, does the path of that art lie which is to lead us to the regions of a higher education, which is to be to us some compensation for the disorders and confusions of life, which is to help us to escape from some of its most depressing conditions and circumstances, into the purer atmosphere of an existence worthy of men and women, whose pleasures lie in the exercise of other emotions than those excited by the charnel, the morgue, and the bloody sword of the executioner.

## AMERICAN BRICKMAKING.\*

THE brickmakers are able to claim a sufficiently remote origin for their craft, for indeed no one can say how early men began to build walls of slabs made of sun-dried clay. Even when it is asserted that TUBAL CAIN must have known where to obtain fire-bricks for his furnaces, who can show evidence to the contrary ? But old as the trade may be, there seems to be not the least probability that it will be allowed to become obsolete. Stone and wood, concrete and artificial stone, iron and glass, are all very well, but they cannot hold their place against brick. It has been so largely used of late years that one might be justified in predicting that the architecture of the future will be mainly expressed in brick. The least improvement in the production of so important a building material is therefore of almost universal interest, and we gladly welcome a book by an author who is an architect and a brickmaker, and in which American practice is described fully and frankly, just as if foreign competition did not exist. Mr. DAVIS is proud of the bricks which are produced in America, and if we may judge by the tests which have been applied to them, his pride is well founded. American terracotta is also of a high class. The manufacture of ornamental tiles is adapted to a country in which artistic skill exists, and who knows but we may shortly see, as Mr. DAVIS foretells, American tiles used in Staffordshire itself ? The Americans in their manufactures from clay are exercising the ingenuity which they have done so much with other materials, and it behoves our manufacturers to avoid underrating the efforts of such formidable rivals. Mr. DAVIS's book will enable them to understand how much progress has been made up to the present.

Brickmaking is one of those arts in which the chemist's knowledge is all-important. Mr. DAVIS maintains that physical tests and experiments are superior to chemical tests, but both kinds should be employed, for one is as essential as the other. The so-called physical testing is very often mere empiricism in its worst form. The difference between "fatness" and "poorness" in clays, which means so much to a brickmaker, is a chemical question, and so are other phenomena. We grant that chemistry is in some things not much of a guide. Why clay when freshly dug should make bad bricks, while clay from the same field, if dug in winter, well exposed to the weather, and turned over two or three times, should produce sound bricks, or why exposure to frost should, as it were, ripen the clay, are questions which an honest chemist must confess to be beyond him. But chemistry will help a man to ascertain whether there are iron pyrites in the clay, when he must expect (if he uses a high degree of heat) to see air-holes in his bricks, or vegetable matter, which will produce a similar result and a larger loss, or limestone pebbles, which mean unsound bricks and much grumbling from buyers. Clay is not always of one quality, and in such cases the bricks will not be fired equally ; chemistry enables us to take the necessary precautions. Mr. DAVIS evidently cares little for chemistry, and, if his book has a defect, it is the absence of analyses. Thus, for example, he tells us that the "best brick clays are composed of silica three-fifths, alumina one-fifth, and the remaining one-fifth of iron, lime, &c." We confess we were exceedingly surprised to find those constituents accepted as expressing the results of analyses in America, for precisely the same formula is to be found in Dr. URE's Dictionary, published a great many years ago. It is a sort of general rule or standard which does not represent all the brick clays of England, and we doubt if it is more true for the States. The Burham clay has only 43 per cent. of silica, and the London clay 49 per cent., neither being equal to three-fifths of the whole mass.

If we had analyses, they might enable us to understand the remarkable strength which is ascribed to American bricks. In MAHAN'S "Civil Engineering," an American book which at one time was used as an authority in England, we are told that a good brick required a weight of 1,200 lbs. per square inch to crush it. Mr. DAVIS says that good bricks, especially those which are specified for public buildings, should be capable of withstanding a pressure of 7,000 lbs. per square inch. The strength of twelve samples which were tested by Major-General MEIGS, for a contract for a public building now in course of erection at Washington, varied from 5,960 lbs. to 10,290 lbs. This is an enormous increase from MAHAN'S time, and,

\* A Practical Treatise on the Manufacture of Bricks, Tiles, Terracotta, &c. By Charles Thomas Davis. Philadelphia : Baird & Co. London : Sampson Low & Co.



assuming the figures in both cases to be correct, is even more remarkable than the improvement which has taken place in the quality of English Portland cement, under the tests of the Metropolitan Board of Works. But how do the figures compare with those relating to English bricks? Mr. GRANT, who superintended the tests for the Board, does not appear to have found an English brick to bear more than a ton, or 2,240 lbs. per square inch, and some are registered as being crushed with 716 lbs. per inch. In the careful experiments which were made in connection with the Britannia Bridge the mean crushing strength was found to be only 521 lbs. When it is remembered that the great piers in St. Paul's Cathedral have not to sustain more than 130 lbs. per square inch, the English bricks appear to be of ample strength. Mr. DAVIS acknowledges that "no bricks have ever before made so good a showing" as those for the Washington contract; and the difference between them and other samples is so great, it is a pity that some information is not given about the testing apparatus which Major-General MEIGS employed.

By an Act passed in 1802 the size of bricks was prescribed, and although deviation from the normal size is no longer penal, the majority of English bricks are of uniform dimensions. American bricks vary in size, and "often there is a diversity in the same location, the measurements for common bricks running from  $7\frac{1}{2}$  to  $9\frac{1}{4}$  inches in length,  $3\frac{1}{2}$  to  $4\frac{1}{2}$  in width, and from 2 to  $2\frac{1}{4}$  in thickness, which variation is largely owing to the nature of the clay employed." The moulds used for hand-made bricks lose their shape, and in consequence bricks made at the close of the year are thinner than those made in the spring. In order to save the public from the loss that would follow the use of attenuated bricks, there is a by-law in Washington by which, under a penalty of twenty-five dollars, all moulds must be stamped by the inspector of weights and measures; the moulds for plain bricks being  $9\frac{1}{4}$  by  $4\frac{1}{2}$  by  $2\frac{1}{4}$  inches, and for stocks  $2\frac{5}{8}$  inches clear. If the American bricks are smaller, it is claimed for them that they are stronger and of better quality than those made in England.

Mr. CARLYLE used to be very severe on London bricks, which he maintained could last no more than sixty years, instead of the six thousand years which should be the term of a brick's life. Mr. DAVIS says that bad as English bricks are in general, those made in London are the weakest, partly owing to the nature of the clay, but mainly from the breeze which is mixed with the clay. It is often supposed that breeze only helps as a fuel to fire the clay, but it can also be employed to serve instead of sand at a much less cost, and it prevents shrinking. Mr. DAVIS says that "clay is the only material of which bricks should be made," and if the Washington bricks are simply of clay they form an argument in support of his theory. But in England, and also on the continent of Europe, clay alone is not supposed to make good bricks; there must be some additional material that corresponds with an alloy for a metal.

We have not space to notice the parts in Mr. DAVIS's book which treat of terra-cotta, tiles, and other fictile works. In them he also represents the American spirit, and there is rather much of the "high falutin" tone. But in advocating the principle that a piece of terra-cotta or a tile should depend for its value upon the quality of the art it expresses rather than the reputation of the pottery, we are in entire accordance with him. There is art work produced in America which can compare with what is done in France as well as in England, and, in fact, the Continental system is adopted in the States; and artists who have been successful in painting gallery pictures and in sculpture have willingly undertaken commissions from manufacturers for designs. The general ambition in the States is for the workman to become a master, and Mr. DAVIS is an advocate for the principle that an artist should possess a share in the business which he has helped to create or extend. According to a French thinker, much fewer thoughts in a writer would be condemned if we endeavoured to conceive them like the author, and, by putting oneself in the position of an American reader, Mr. DAVIS's book will appear to have few shortcomings. That it occasionally shows a want of respect for English practice must be admitted, but, on the other hand, the book tells the reader more about the processes employed in brickmaking and the allied crafts than is to be found in any book published in this country.

**The Luxembourg Museum** was closed on Monday in order that the pictures purchased by the State at the Salon exhibition may be hung. It will reopen on the 15th inst.

## THE BERLIN MUSEUMS.

A LETTER has appeared from Mr. John Leighton, F.S.A., in which he writes:—Hitherto Berlin has not been to the fore in matters of art, nor, indeed, has it been the art capital of Germany. Now it is awakening to a sense of the importance of art culture, not alone in painting and sculpture pure and simple, but to the development of those arts as applied to home dwellings and the necessities of daily life. The old museums are being enlarged, while the Kunst-Gewerbe Museum (evidently a copy of our own at South Kensington), though hardly occupied, sees another still larger rising beside it. In the Beuth-Schinkel Museum they have now arranged the Hamilton books and the Botticelli drawings, which will soon be on view.

This German metropolis is particularly rich in samples of early Italian art, and one cannot but admire the solicitude of the new Empire to enrich its capital. The Schliemann acquisitions from Troy are now perfectly arranged, though in art influence they are of small importance beside the magnificent marbles recently recovered from the Acropolis of Pergamos in Asia Minor. These works, though they may be wanting in classic purity as compared with those of the Parthenon in the British Museum, evince a vigour of picturesque treatment surpassed by none. They are colossal in size and formed the bas-reliefs to the altar enclosure of the Temple of Jupiter, representing, as they do, the triumph of Zeus and Athene over giants and monsters. These works were known to us, some fragments from the same place being now in Bloomsbury; and it is not much to our credit that we should have allowed such an enduring attraction to have become the property of another nation more on the alert than we. The greater part of the fragments lie like huge mosaics on the floor of an immense gallery in two long lines, and at present have to be viewed from above, though four of the most complete sections are now set up under the dome in the vestibule for the purpose of being photographed; and I would strongly advise our sculptors to acquire a copy of these works (circ. 180 B.C.), as they develop a richness of fancy, knowledge of form, and grandeur of execution found in no other works on so large a scale. The flow of line action and treatment of drapery is marvellous. Unfortunately, many parts are missing, though the perfect state of much is astonishing, showing the work of various hands governed by one master mind.

In Berlin, upon the space between the cathedral and the national museum, I believe it is the intention of the emperor to build a Campo Santo. The ground is at present occupied by a temporary erection containing full-sized copies of the gables of the ends of the Temple of Olympia, with plans, photographs, and restorations of the same; also the *Nike* of Pionios and the *Hermes* of Praxiteles, as restored by Schaper. This latter is one of the few divine statues of the world, owing its preservation entirely to having fallen upon mud, where it rested until discovered in 1877. I am told that diplomacy here has exercised great pressure and temptation upon Greece to induce the ruler of the Hellenes to part with the original, hitherto in vain, King George having stronger relationship with Russia than Germany.

## THE HERKOMER ART SCHOOL.

THE first session of the Herkomer Art School has come to a close, and so great has been its success that the President is sanguine enough to predict that if it goes on as it has done it will in five years be the leading art school in Europe. The personal aspect of things works so well, the individuality of each student has been so prominent and sustained, and the special criticism addressed to each one according to need before the whole class has succeeded so well, that no results of work such as has been executed by the students at Bushey are to be found in any other art school. At South Kensington especially, the laborious striving after the perfection of mere detail is persevered in at the expense of the spirit of a subject. One of Mr. Herkomer's first objects was to bring the students to realise what was "artistic;" they had no difficulty in seeing when things were right, correct, and measured, but the ladies especially were a long time coming to the true sense of what art means. Bold, daring work was encouraged, and little personalities, if not abnormally mannered, were not suppressed. The wide latitude thus conceded produced some striking work, and of so varied a character that Mr. Herkomer himself sometimes could not tell whose study was before him. Another noteworthy fact is that a few strong students have established a type of work which the others have to a certain extent followed. There has been no trifling; all the students have worked remarkably hard, and all at times have been utterly depressed and downcast about their work; more so, their President believes than in any other body of art students. In every case the depression has borne good fruit, for no effort has been spared to reach the ideal vaguely hovering before them. The first difficulties arose from the peculiar light of the studios. It was of so subtle a character that the first month was disastrous to all alike; but, encouraged by the assertion that if they could



paint in that light they could in any, the students persevered, and most now succeed in all but the triangular room, where the figure is painted entirely surrounded by light. This has been christened the "torture" room, because of its susceptibility to all the variations of daylight as the earth changes its position with regard to the sun. Very little landscape work has been done, in the belief that if the facility to paint everything in the way of figures were acquired it would be comparatively easy to paint anything else. Several students, on the other hand, have learnt all the processes of etching, and have produced their own designs in Mr. Herkomer's workshop. Of work of this class the public will perhaps be able to judge in the ensuing session; for if sufficient good designs are forthcoming, they will be published in folio form and sold for the benefit of the students. Some designs were sent in this year; but the students, although a few sent really excellent subjects, were for the most part too young for the effort. All other work will, however, be kept strictly private; no studies will ever be shown, and no rewards or prizes offered, the aim being to work for love of art simply. Except in some small matters of order, no alterations will be made; the original scheme will be pursued without any modifications whatever. There has been no difficulty in enforcing the rules. Severe as they were, they have never been broken; every effort has been made by the students to keep up to time and work conscientiously every day. Mr. Herkomer speaks with much satisfaction and admiration not only of the results in this direction, but also of the courteous, frank, and kindly behaviour of the students one towards another. With fifteen gentlemen and nineteen ladies it would not have been unreasonable to expect some two or three to flirt, to quarrel, or be snobbish. But nothing has occurred to break the peace of the small art community, and no complaint of any kind is made against any one of the thirty-four. Their intercourse one with another has been of the most genial character: musical evenings, tea parties, and picnics have been given amongst the students, a reading-room of current literature and a library of reference have been formed, and each Saturday Mr. Herkomer, throwing off the master, cordially invited all the students to dine and spend the evening with him. The first night the "Meistersinger" was produced Mr. Herkomer took seats for them at the opera; in the winter he obtained free passes for them to the chief art exhibitions; and in the summer they have had lawn tennis as a recreation after their hard work.

The next session, which commences October 6, will see not a few of the old students back; the weeding out which Mr. Herkomer reserved for his discretion has not been very great. Some have left because they themselves felt unable to continue; others to study by themselves, the school being no longer enough for them; whilst of those who remain, some, Mr. Herkomer considers, have not had sufficient chance, being of slower development than the others; and some, again, return at their own wish. The school will never be a large one. The original maximum of sixty has even now been curtailed to fifty, and it is probable that just as Mr. Herkomer only accepted some thirty students to start with, he will not take the full number for another year or two. The specimen gallery, which was to be a special feature of the school, has, thanks to the generous response of living artists, been well supplied throughout the year.

## MR. SHAW-LEFEVRE ON THE RESTORATION OF WESTMINSTER HALL.

ON Tuesday Mr. Shaw-Lefevre, First Commissioner of Works, invited a party of ladies and gentlemen to Westminster, when (in the absence of Mr. Pearson) he explained the proposed restoration. Mr. Shaw-Lefevre spoke as follows:—

When the buildings of the old law courts were demolished, and the front of Westminster Hall, with its flying buttresses, was for the first time exposed, I had no idea that any such works as are now contemplated by Mr. Pearson would be necessary. All that I contemplated was a repair and a restoration of the walls of the building and of the flying buttresses, and possibly also a lengthening of the existing windows of the hall. It was at once apparent that these windows are not of good proportion; they are very short—they are, indeed, much shorter than the windows on the east side of the hall—and it occurred to me, and to most people who looked casually at the building, that when the law courts were built, at the commencement of this century, the windows on this side must have been shortened in order to enable the law courts to be erected close to the hall. With a view, then, to effect the necessary restorations, and possibly to lower the sills of these windows so as to make them of better proportions, I requested Mr. Pearson, than whom there is certainly no architect in the country better qualified, whether from his great experience in such cases, his great knowledge of Gothic architecture, and his well-known tenderness in dealing with restorations, to investigate the subject. He has during the last few months made a most laborious research into the history of the hall from all the records and prints that are to be found of it, and has excavated all the foundations

of the buildings formerly annexed to it. These researches have brought to light many most interesting facts connected with the hall. It is now certain that all the lower part of the wall nearly up to the sills of the windows, and including the flat buttresses standing against the wall, are exactly in the state in which they were built by William Rufus. The marks of the chisel are still to be seen on this wall and on these buttresses. The perfect condition of this old Norman masonry is due to the fact that from a very early time it was completely covered and secured from damage by a cloister which ran along the whole length of the hall. This was erected by Richard II. In his time the present noble roof was erected; the flying buttresses were also built in order to give support to the roof. The upper part of the wall was completely remodelled. It was refaced with new stone, and the present windows were inserted. At the same time, he undoubtedly erected a double-storeyed cloister under the flying buttresses and against the wall of the hall. The foundations of the wall of this cloister have been laid bare along the whole length of the hall between the buttresses. Its roof and the floor of the upper storey were supported by arches springing from the Norman buttresses against the wall so as to avoid throwing the weight of them on the wall of the hall itself. You will see the indication of both tiers of arches in every bay between the buttresses, in some more perfect than in others. It is quite certain, therefore, that a double cloister existed here from the time of Richard II. till the beginning of this century, when Sir John Soane erected the law courts. There are also existing plans made by Sir Christopher Wren showing how the upper floor of the cloister was divided into rooms. They were approached by stairs in the hall itself and also by a staircase outside the hall. There is no plan existing showing how the lower storey was laid out. It, perhaps, consisted of cellars with open arches, as Mr. Pearson thinks, or, perhaps, of a long gallery; but of the existence of this double-storeyed cloister there cannot be the smallest doubt. Its roof cut across the flying buttresses, and the corbels of the flying buttresses were in the rooms of the upper storey, just as in the case of Westminster Abbey the corbels of the buttresses are to be found in the chapels of the side aisles. The walls in this upper storey were painted, and Mr. Pearson states that in wet weather the traces of paint are still visible. As I have already said, the existence of this cloister preserved the Norman walls down to the present time, and the existence of this cloister also accounts for the windows above it being so short. The lower part of these windows must have been cut off from view by the wall of the cloister except at a distance; the buttresses stood out at least 8 feet beyond the wall, and the flying buttresses must have been visible above the cloister. At the north end of the cloister and at right angles to the hall you will see the foundations of a building of about 60 feet in length and 30 feet in depth fronting New Palace Yard. This building, erected originally in Richard II.'s time, was replaced later by a Tudor building, the upper part of which was used as a residence by Queen Elizabeth, and later as the Great Hall of Exchequer, while the rooms in the upper part of the cloister were used as private rooms by the judges when the courts sat in Westminster Hall itself. This, then, being the actual condition of the hall, the question naturally arises what should be done with it. Two alternatives only, I think, present themselves—the one is to patch up the wall and the buttresses, leaving the west front very much as it is; the other is to rebuild the cloister as nearly as possible as it existed from the time of Richard II. to the present century. If the first course be adopted, it would be necessary to recase the whole of the lower part of the wall—the old Norman work of William Rufus—with fresh stone, as the existing stone will not bear exposure and will certainly perish. All the remains of the arches which I have spoken of will also disappear. I venture to think that such a course would be most unwise. It would be an act almost of Vandalism. We should lose almost the only existing piece of stone-work of Norman times in the metropolis. I doubt whether any responsible architect could be found who would advise such a course or who would undertake to carry it out. The hall also thus dealt with would not look well. The windows, as I have pointed out, are not in good proportions, and the buttresses standing out as mere supports to the wall of the hall would be unsightly. There is scarcely any precedent for flying buttresses in this condition; as a general rule they are intended to enclose between them and the wall or roof they support some side aisle or cloister. The other alternative is, as I have said, to rebuild the two-storeyed cloister in the form, as near as possible, in which it originally existed. The advantage of this will be that it will act as a protection to the Norman wall behind it, which can then be left uncovered and always open to view. It will also, in the opinion of those much better qualified to judge than myself, add great dignity to the hall. There will be two rows of windows, and a double set of battlements, and the lower storey of the cloisters will be lighted by open arches with grates. Now the main objection to all this is that the hall itself even thus restored will not be an effective object in the general view of the building; that it was never intended to be exposed to view, and that it ought to be surrounded by other buildings as it was in olden times—and those who hold this view consider that it would be better to complete Sir Charles Barry's original intention of building a new wing from St. Stephen's Porch



parallel with and in front of the hall, to join another wing from the Clock Tower. In the first place I would reply to this that such a work would cost at least 300,000*l*. It is not, as far as I know, wanted for the accommodation of the House. All idea of making this addition was long ago definitively abandoned. As the front of it would extend beyond the line of the roadway, it would narrow very inconveniently the road between the Houses of Parliament and St. Margaret's Church, and further it would not solve the question what should be done for the restoration of the front of Westminster Hall. The hall would be hidden behind this wing, but it would still be exposed to view in a court-yard, and it would be necessary to do something with it. What we now propose to do is not inconsistent with the addition of the wing, if at some time hereafter it should be thought desirable to add largely to the buildings. Lastly, I myself think that on the score of dignity of the building, and the general beauty of the group, it would be far better to leave the hall exposed, but restored as now proposed. Sir Charles Barry's building, as a whole, is a noble and beautiful one; but my belief is that if these wings were completed the effect would not be good. There would be monotony in the endless reiteration of the same elaborate detail. The great hall with its high pitched roof and massive walls is, I think, a great relief to the eye and a break in the monotony of the building. When the whole building is seen from the other side of Parliament Square, Westminster Hall when restored as it is proposed will form, with Sir Charles Barry's ornate buildings and beautiful towers, and with the Abbey, the most interesting and beautiful group of buildings to be found in Europe. This, however, is a matter of taste which it is difficult to argue. Another of Mr. Pearson's proposals is to raise two towers on the north side of the hall. The existing towers are completely dwarfed by Barry's building, which rises above them; and Sir Charles Barry himself contemplated raising these towers. This, however, is a work which will not be undertaken at present, and the consideration of it will stand over for another year. There remains only to consider the cost of the proposed works. The total cost is about 35,000*l*; of this 5,000*l*. is the cost of completing the side of St. Stephen's Porch on the plans of Sir Charles Barry; 8,000*l*. is the cost of raising the two towers; 7,000*l*. is the cost of repairing the wall and buttresses of the hall—the lower parts of the buttresses must be rebuilt—and 14,000*l*. is the cost of building the cloister and the building at right angles to the hall. On this arm we shall have two long galleries, 200 feet long by 20 feet, the lower one of which may either be used as an access for carriages to the hall or may be broken up into rooms opening into the hall. The upper gallery may be broken up into rooms. There will also be a noble room, 60 feet by 30 feet, which would be used for grand committees; and below there will be a standing place for horses in lieu of the present shed. This expenditure of 14,000*l*. is the only debatable point at present, and I do not think the total sum required is large for completing in a worthy and dignified manner the west front of this hall. As the wall of the hall was much injured by exposure to the weather in the past winter, I hope to be allowed to take a vote at once for this, so as to commence the work at once.

## EDUCATION, SCIENCE, AND ART.

THE Select Committee of the House of Commons appointed to consider how the Ministerial responsibility under which the votes for Education, Science, and Art are administered may be best secured have agreed to the following report:—

Your Committee have examined the present and several former Presidents and Vice-Presidents of the Council, Secretaries to the Lord Lieutenant of Ireland, permanent heads of the Education Department in London, the present Resident Commissioner of National Education in Ireland, and also other gentlemen conversant with the matters referred to your Committee. They have also considered the evidence taken before the Select Committee appointed in 1865 and 1866 to inquire into the constitution of the Committee of Council on Education.

The first question considered by your Committee was whether primary education in Great Britain and in Ireland should be placed under one supervising Minister. Your Committee are satisfied that under present circumstances it would be undesirable to disturb the existing arrangements as to the Ministerial responsibility for primary education in Ireland. They are also of opinion that primary education in England and Scotland should be under the control of the same Minister.

The Lord President of the Council, almost always a peer, is nominally the head of the Education Department for Great Britain. The Vice-President represents the department in the House of Commons, and really transacts almost all the business requiring authority above that of the permanent officials. Your Committee are of opinion that this arrangement is neither logical nor convenient. They see no sufficient reason why there should be any more real connection between the Education Department and the Privy Council than between the Board of Trade and the Privy Council; but as it may be convenient that the Minister for Educa-

tion should have occasionally the assistance, whether as to English or Scotch education, of other Privy Councillors specially summoned for consultation with him, they recommend that a Board of (or Committee of Council for) Education should be constituted under a President, who should be the real as well as nominal Minister, in this respect holding a position like that of the President of the Board of Trade. Hitherto there has been a separate Scotch Department of the Privy Council, and your Committee consider that it would be well to have a distinct permanent secretary appointed for Scotland, responsible to the Minister of Education.

Whether the Minister of Education should always be a member of the Cabinet or of the House of Commons, and what should be his salary, are questions upon which it is hardly within the province of your Committee to make absolute recommendations. They think, however, that the duties of this Minister should be recognised as not less important than those of some of the Secretaries of State. The Minister of Education should have the assistance of a Parliamentary Secretary, able to sit in either House of Parliament.

While on the whole preferring the plan they have suggested, your Committee do not deny that there are objections to the constitution of an administrative department in the form of a board which has no real existence. The permanent secretary and his assistants bind by their signature, nominally the board, really, the political chief. This system, it must be admitted, tends to lessen the direct control and responsibility to Parliament and the public which is apparent in the office of a Secretary of State.

The second question discussed by your Committee was whether, and if so what, authority should be exercised by the Minister of Education over endowed schools. Your Committee recommend that when schemes for endowed schools, whether in England or in Scotland, have come into operation, the Minister of Education should have full authority to call on the governing bodies to furnish him with such reports and information as he may require, and to direct any inquiries or inspection to be made which he may deem necessary.

As to public schools, your Committee recommend that the Minister of Education should be authorised to call for such reports and information as he may require from the governing bodies, but they are not of opinion that his powers should extend to directing inspection. With respect to the Universities in Great Britain receiving grants charged on the votes of Parliament or on the Consolidated Fund, the Minister should be authorised to require from them an annual report in such form as he may order. Your Committee have not taken any evidence as to reformatory and industrial schools, considering that these have so recently formed the subject of an inquiry by a Royal Commission, the report and recommendations of which are before Parliament. They see no reason for altering the present responsibility for workhouse schools or for the primary schools connected with the Army, the Navy, or the Marines. The responsibility for the administration of the votes for military and naval colleges does not appear to come within the reference to your Committee.

Your Committee see no reason to disturb the existing arrangements as to the supervision of the Science and Art Department.

There are various miscellaneous votes for science and art, such as those for scientific research distributed through the Royal Society, votes for meteorology, and votes in aid of the Royal Society of Edinburgh and the Royal Irish Academy. These votes, your Committee think, should be moved by the Minister of Education, and reports, when necessary, should be made to him.

Your Committee do not propose to bring the British Museum and the National Gallery into closer relations with Her Majesty's Government than those now existing, with this exception, that, in their opinion, the Minister of Education and the Parliamentary secretary should be *ex officio* trustees of each of those institutions. The President of the Council, your Committee notice, is now an *ex officio* trustee of the British Museum. The House of Commons would then look to the Education Department for explanations when the votes for the British Museum and the National Gallery are discussed in Committee of Supply.

The Committee, of which the Chancellor of the Exchequer was chairman, included, among other members, Sir J. Lubbock, Mr. Salt, Mr. Raikes, Sir L. Playfair, Mr. S. Morley, Mr. Pell, Mr. Sclater-Booth, and Mr. J. Collings.

**The Krupp Foundry at Essen** in 1860 had 1,764 workmen, but that number had risen to 7,084 ten years later, and it is now upwards of 20,000. Counting the women and children, Herr Krupp's establishment gives employment to 65,381 persons, of whom 29,000 live in houses belonging to their employer. The foundry is divided into eight sections, and there are 11 blast furnaces, 1,542 other furnaces, 439 steam boilers, 82 steam hammers, and 450 steam engines representing 185,000 horse power. At Essen alone, to say nothing of the branch establishments, there are nearly 40 miles of rails, 28 locomotives, 883 trucks, 69 horses, 191 wagons, 40 miles of telegraph wires, 35 telegraph stations, and 55 Morse instruments.



## NOTES AND COMMENTS.

SIR GEORGE CAMPBELL asked, on Monday last, the First Lord of the Treasury whether he would use his influence with the First Commissioner of Works to induce him to reserve for grand committee rooms and other extensions the ground to the west of Westminster Hall lately occupied by the law courts, so that the hall might be again, as it was originally, the centre of the Palace of Westminster. It is most desirable that this question now in debate should be put on its right basis, and it is historically absurd to suppose that the hall was built as a centre to numerous apartments. On the contrary, WILLIAM RUFUS, finding St. Edward's Hall too small to entertain the numerous followers of his father and their descendants, added the great hall to the palace, the kitchen being probably on the site of St. Mary de Crypt, the main body of the palace being to the south of this. WILLIAM RUFUS's hall had two rows of pillars and arches running the whole length, and consequently had a triple roof, like that of the choir of the Temple Church, and, therefore, the building was lighted by windows on both sides. This roof was probably destroyed by the great fire in circa 1370. To restore the hall RICHARD II.'s architect conceived the grand idea of the present magnificent single roof, and cleared away the pillars and arches of the old roof, not for the purpose of a Parliament House, for, from the time of HENRY III., Parliament met in the Chapter House of the Abbey, and that the palace extended to the south is shown by the existing Jewel Tower. Additions to the north of the hall, and some low buildings to the west, were added afterwards in the times of HENRY VII., HENRY VIII., and of ELIZABETH. The building of the cloisters of St. Mary de Crypt, and of St. Stephen's, one above the other, and the Bell Tower, darkened the hall and made the alterations by RICHARD necessary. RICHARD kept to the floor level of RUFUS, and thus from the silting up of the river boats at high tides were rowed up and down the hall within the memory of man. This latter fact is a point deserving consideration at a time when it is contemplated to build a cloister with steps *up* into the hall.

MR. PEARSON, R.A., has asked us to state that in the articles on his proposed restoration of Westminster Hall it was not quite correct to say, "Mr. PEARSON does not, in his proposed parapet, restore its details, nor even replace it on the same position or at the same level." Mr. PEARSON says it is not his intention to deviate from the lines imposed by the old remains where such exist.

LAST year the Manchester Ship Canal Bill passed the House of Commons, but was rejected by the Lords. This year the relations of the two Houses to the Bill were reversed, but in both cases an enormous sum of money has been wasted. That the promoters will persevere may be assumed as certain, for Manchester men are not to be daunted by a couple of defeats. The opponents of the scheme in Liverpool have admitted that there is no objection to that part of the scheme which deals with the district between Runcorn and Manchester, and the engineers can, without much difficulty, devise plans which will obviate injurious interference with the estuary of the Mersey. It is not denied that with a ship canal the saving in the cost of transit in the cotton trade would at least amount to half a million, and with so large a gain in view, the Committee will be justified in again lodging these plans with Parliament. The struggle is great, and has been carried on most creditably on both sides.

WHATEVER may be thought of Mr. PERRY's theories on sculpture, he merits unstinted praise for his perseverance in urging the South Kensington authorities to form a gallery of casts of Greek works. The gallery is now open to the public, although some of the examples are not in their places. Altogether there are about two hundred and fifty works, and they are suggestive of the growth and decline of Greek sculpture. Probably no two experts would agree about the choice of examples to illustrate the history of the art; but there are certain works which are as it were landmarks in that history, and copies of them are in the gallery. The Lion Gate at Mycenæ, the Branchidæ figures, the metopes of Selinus, the STRANGFORD Apollo, the group of Harmodios and Aristogeiton, the Ægina pediments, the Parthenon sculptures, the Mausoleum

at Halikarnassos, the Venus of Melos, the Dying Gaul, the Spinario, the Lateran Sophocles, the Ludovisi Juno, the Vatican Augustus, the Antinous, and the Roman portrait busts are among those works. The originals of some of them are in the British Museum, but others are found scattered through Europe, and even the travelled student will admit the advantage of having so many representative works collected in one gallery. The public, it is to be hoped, will take advantage of so great a boon. When the Sydenham Palace was founded, great expense was undergone to secure copies of famous statues, but they were never appreciated. The visitors preferred clowns, niggers, and dancing dogs to the best works of PHIDIAS. Times have altered, and we trust the South Kensington collection may have a happier fate. A useful handbook to the gallery has been compiled by Mr. PERRY.

THE Office of Works has lost no time in informing Messrs. LEEMING & LEEMING that, subject to the approval of Parliament, they will be appointed as architects for the new Admiralty and War Office. In the meantime the architects are to be placed in communication with the Office of Works, in order that such modifications and improvements in the plans as shall be suggested may be carried out. If the officials have a clear notion of what is best, it would have been wiser if it had been embodied in a sketch plan for the use of the competitors. It has not been announced what the Commander-in-Chief thinks of the various plans which are hung in Spring Gardens, although that opinion must be invaluable.

It has been stated that an Oxford scholar proposes to publish the best English renderings of the so-called poems of SAPPHO. He will find great difficulty in discovering a translation of the "Hymn to Venus" which will bear comparison with one by Mr. MARTIN MACDERMOTT, an architect now living in London, which was published many years ago in the *Cork Magazine*. It is a poet's version, without any of the stiffness and unreality which characterise the majority of versions of the shorter Greek and Latin poems.

WE have received several inquiries respecting the date for which plans must be sent in for the Amsterdam Competition. The particulars may be interpreted as stating that four months from May, or about the end of September, is the time given; but we have been informed on good authority that the competitors have until the end of October. Copies of the conditions, with a plan of the site, may be obtained by applying through the post to the Town Clerk, Amsterdam. A letter written in English will suffice. The Corporation are anxious to have a good international competition, but they seem to be of opinion that all the world takes an interest in the affairs of Amsterdam, and accordingly the competition runs the risk of being confined to a few architects.

FOR this year's examination at the City and Guilds of London Institute the subject of carpentry and joinery was added for the first time. Three hundred and sixty-nine candidates were examined, and of that number one hundred and twenty-five passed. Mr. W. W. Pocock, F.R.I.B.A., the Master of the Carpenters' Company, was the examiner, and states that, "as a whole, the papers were very creditable." But two hundred and forty-four failures, or sixty-six per cent. of the whole, are somewhat disheartening. The honours examination in carpentry and joinery for 1884-85 will consist of three parts:—(1) Advanced questions on the syllabus; (2) technical drawing; (3) the designing and executing during the year preceding the examination of an original piece of work, to be forwarded to London, together with drawings and particulars of quantity and quality of materials used. The last test is the most important, but without the influence of local trade societies we doubt if many carpenters will undertake the expense that is necessary.

MR. G. W. HASTINGS, M.P., has given notice that he will reintroduce his Bill to amend and consolidate the law of copyright in works of fine art and in photographs, and for representing the commission of fraud in the production and sale of such work, on the first day of next year's session of Parliament. It will be in the identical form of the Bill which was not successful in reaching a second reading during the present session. The delay is to be regretted, as the clauses had been revised throughout under instructions from Mr. BASIL FIELD.







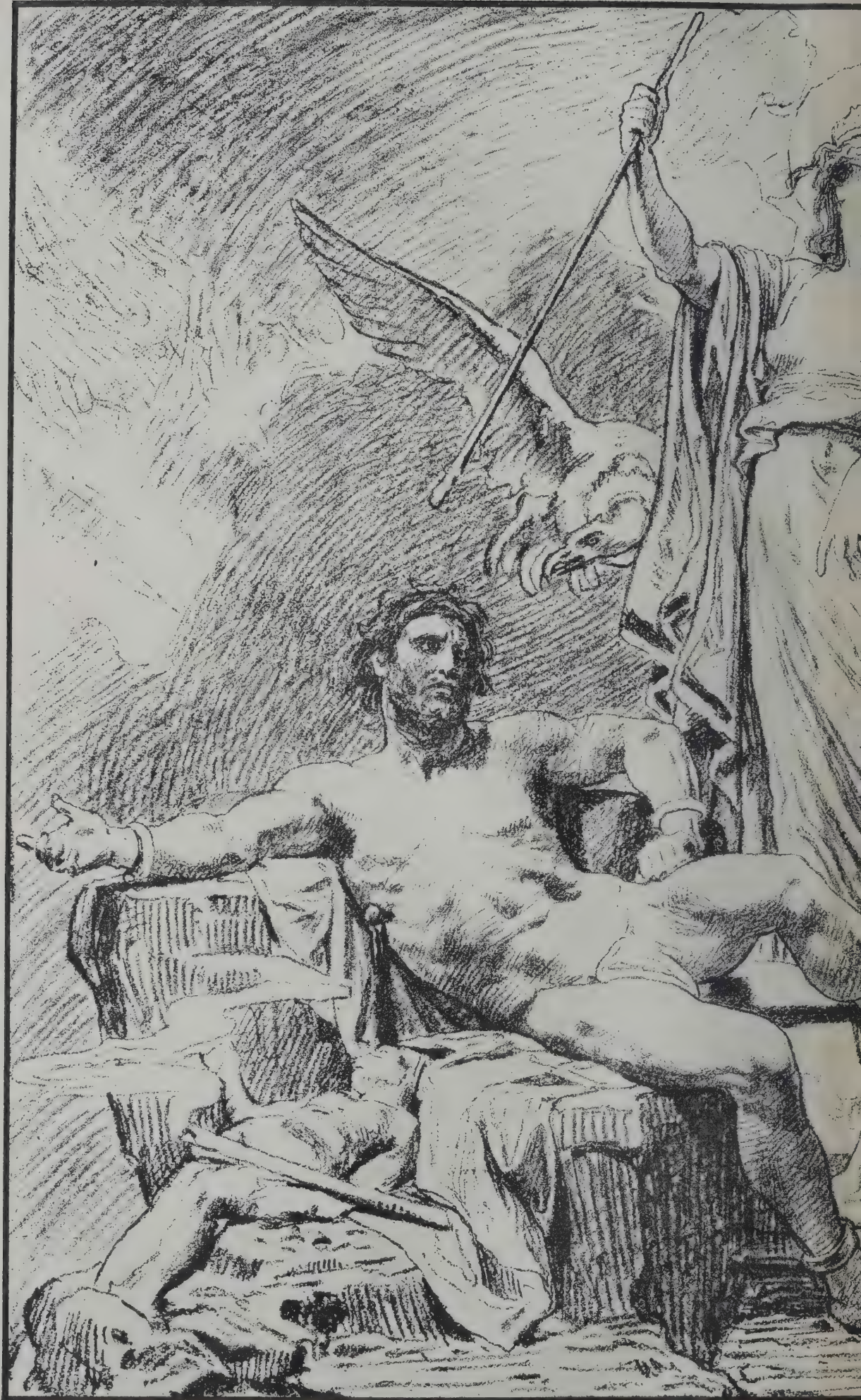
Houses : Iona Ditton : Surrey  
J. NIXON HORSFIELD : ARCHT. : SURBITON HILL : S.W.











PROMETHEUS

FROM THE PAINTING



19<sup>th</sup> 1884.



BOUND.

M. D. U. N. MAILLART.



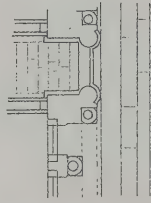
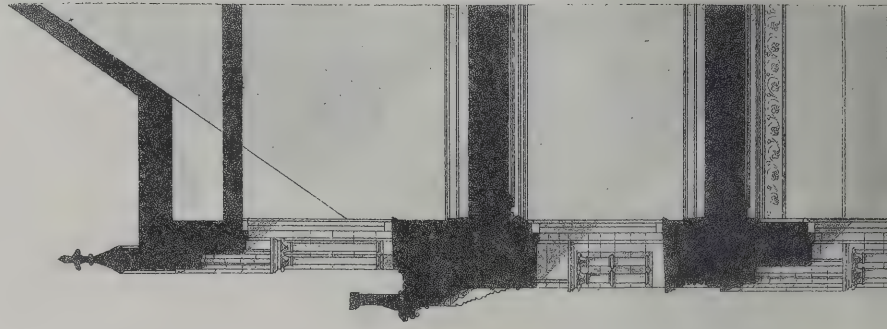
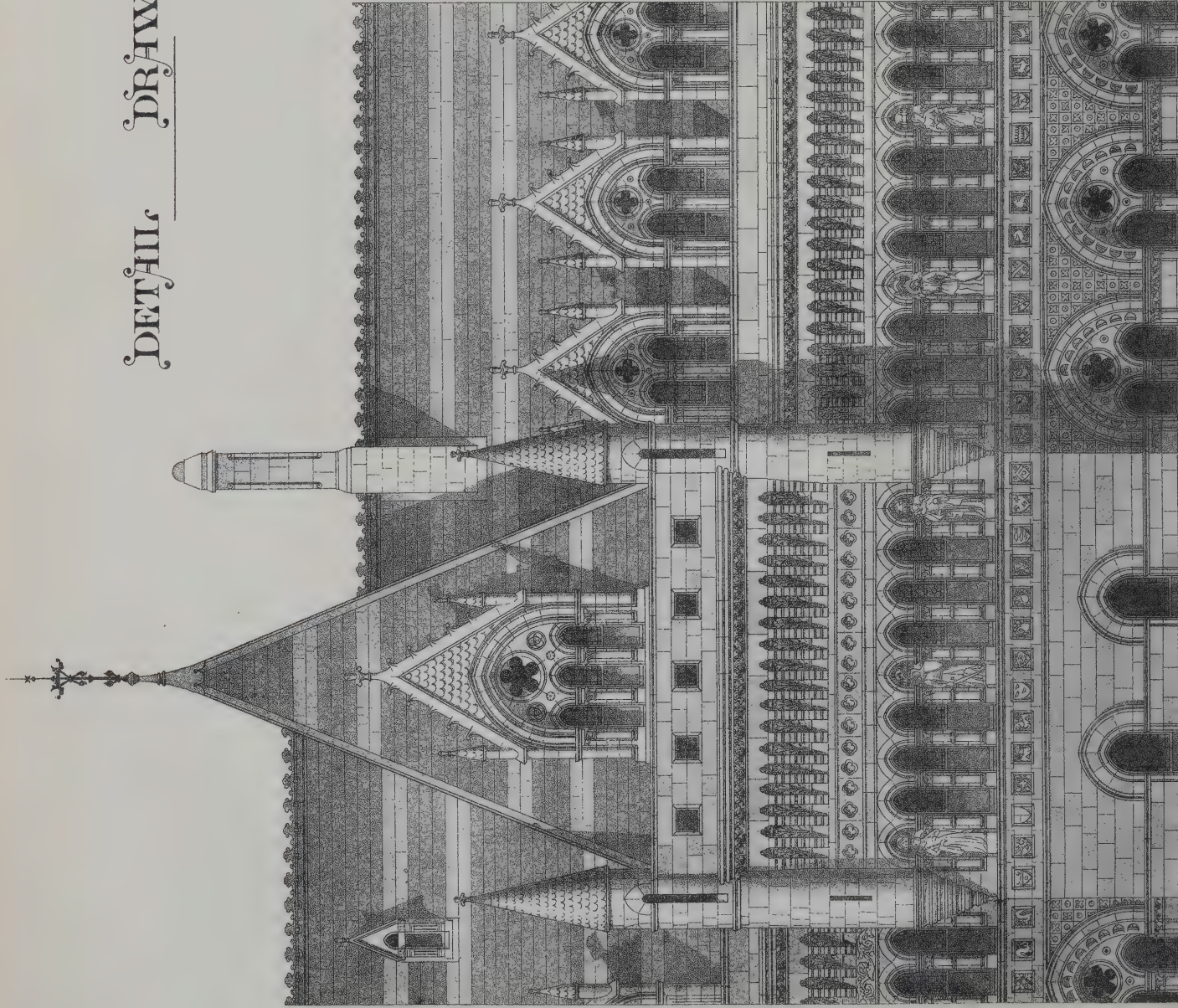




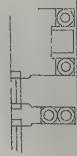




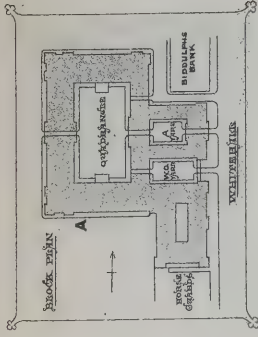
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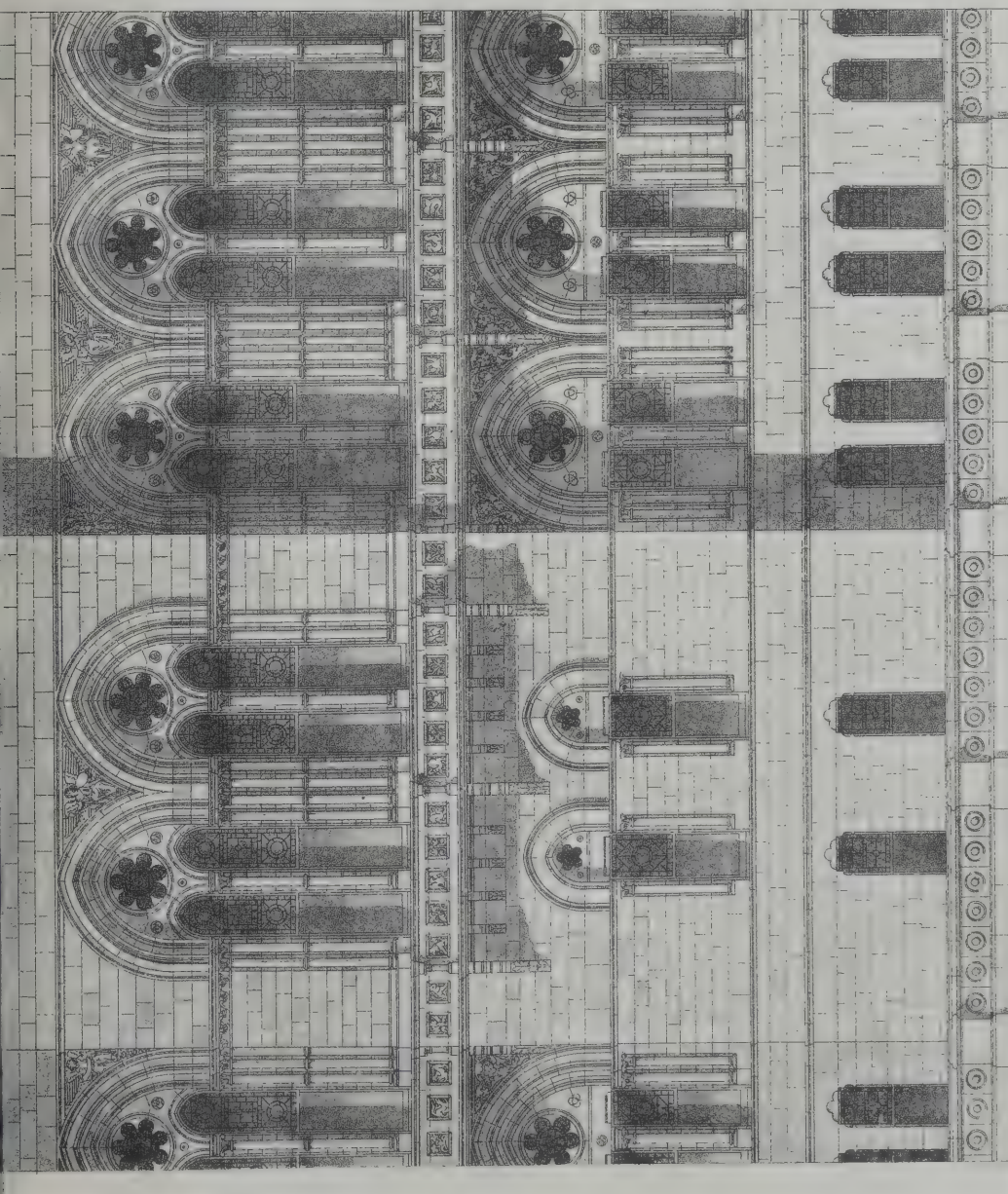
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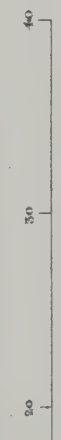
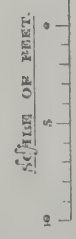
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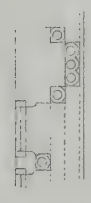
SECOND -



PART ELEVATION OF SOUTH (PARK) FRONT.



"INK PHOTO," SPRAGUE & CO., LONDON.

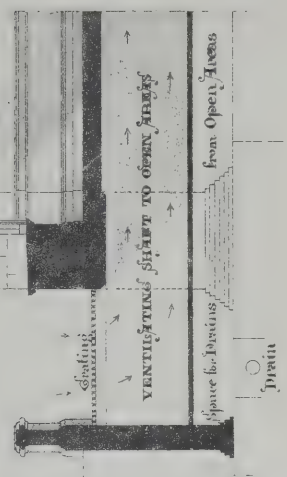


FIRST -



GROUND -

PICCHINS



SECTION

DESIGN FOR NEW ADMIRALTY AND WAR OFFICE

BY MESSRS GLOVER & SALTER, ARCHITECTS.









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## ILLUSTRATIONS.

PROMETHEUS BOUND.

THE picture from which this illustration is taken measures about 10 feet by 12 feet, and is one of those academic works in which, despite all the changes of taste, French connoisseurs can take pleasure. But it would be an error to suppose that the author confines himself to classical subjects. M. MAILLART has gained repute by portraits, pictures of every-day life, Scripture scenes, historical paintings, and designs for tapestry, as well as by his skill and learning as a professor. The scene which is depicted will be at once recognised as representing the opening scene in the *Prometheus Bound* of ÆSCHYLUS. As a punishment for having stolen fire from heaven and taught the rudiments of the arts to men, PROMETHEUS was chained to a cliff somewhere on the Caucasus. He was brought there by Strength and Force, who compelled HEPHÆSTUS or VULCAN to carry out the commands of ZEUS. But the smith is unwilling to affix bonds to the "high-minded son of THEMIS," which are to endure for thirty thousand years, and the following dialogue is heard:—

STR.—Well, well! why dost thou linger? why indulge  
In useless pity? Why not rather hate  
The god to gods most odious, who betrayed  
Thy bright prerogative to human kind?  
HEPH.—Of mighty influence is the conjunct tie  
Of kindred and familiar intercourse.  
STR.—Agreed, but how to disobey the sire?  
Does not this fear exceed that influence?  
HEPH.—Ruthless and reckless hast thou ever been.  
STR.—Wailing can't heal him; weary not thyself  
With idle and unprofitable grief.  
HEPH.—Out on my craft—my hateful handicraft!  
STR.—Why dost thou hate it? In good truth thy art  
Is wholly guiltless of thy present grief.  
HEPH.—Would that some other had it for his lot!  
STR.—Gods have done all they will, except the will  
To have the rule; for none is free but Zeus.  
HEPH.—I know it, and have nothing to gainsay.  
STR.—Wilt thou not hasten then to fetter him,  
Lest the dread sire behold thee loitering?  
HEPH.—The manacles are ready.  
STR.—With thy mallet  
Drive, clench them on him, bolt them to the rock.

It is sometimes supposed that Strength and Force are sons of STYX. M. MAILLART, with a purer appreciation of poetry, shows them to be goddesses, who are merciless as the Parcæ or Fates. Probably there would be no error in imagining that the picture is emblematic, and that the crowned Strength is a type of Germany, the conquered but unfaltering PROMETHEUS being a type of France.

## DESIGN FOR NEW ADMIRALTY AND WAR OFFICES.

WE publish reproductions of two more of Messrs. GLOVER & SALTER's geometrical drawings.

Arrangements had been made to publish some of the perspectives in this week's number of *The Architect*, but as the plates were not considered to do justice to the original views we were compelled to reject them. Our subscribers will find that there is an advantage in deferring the publication of the designs for a short time.

## HOUSES, LONG DITTON, SURREY.

THE two houses shown in the illustration were lately erected from the designs of Mr. J. NIXON HORSFIELD, architect.

## TECHNICAL EDUCATION.

A PAPER on this subject was read by Professor Garnett, of Nottingham, at the International Conference on Education, which was held at South Kensington on Tuesday. The author maintained that all technical teaching should commence in an attempt to teach the student to understand and to reason upon what he saw. Froebel's system laid a solid foundation for this in the infant school, trained the child's eye to form, his fingers to learn mechanical dexterity, and to master the elementary principles of design. At a later period the "object lesson" would call forth his reflective powers, his powers of observation, and any inventive faculties he might possess. Then the lessons of measurement should be taught, and after these had been acquired the elements of mechanics should be introduced. The speaker passed

through the various stages of technical teaching gained in his experience in Nottingham, where technical instruction has borne good fruit for the town directly and for the country in general. He held that there was one other feature which should form an important part of every provincial technical school—namely, a museum. This should comprise a collection of kinematic models, as well as of models and specimens illustrating applied mechanics, including the strength of materials, and one of the chief objects of the workshops should be the equipment of such a museum. Finally, a very important feature of the engineering school was the testing department. Here the practice of making accurate measurements, the necessity for which had been constantly pointed out in the elementary school, might attain its highest development. There were many large manufacturing towns in this country in which no testing machine existed. In such towns this department might become a small source of income to the college. In conclusion, he alluded to the very great service rendered to technical education by Sir Joseph Whitworth. When the Whitworth scholarships were first founded there existed in the science classes of the country a certain amount of machinery to enable the workman to study science. With the growth of technical education these facilities had increased and assumed a more practical aspect, and consequently the Whitworth scholarships themselves had become more valuable to the country. One generation of Whitworth scholars had become the teachers of the next, and as the facilities for technical education became greater, instead of the larger institutions of the future eclipsing those of the past, we should look back upon the gift of Sir Joseph Whitworth as that which in great measure had rendered those larger institutions possible.

## ROMAN ALTARS IN BRITAIN.

A REPORT was read by Mr. Blair at the last meeting of the Newcastle Society of Antiquaries on the Roman inscribed altars at Housesteads. It was as follows:—At the monthly meeting held in December last the writer of the paper brought under the consideration of the society three objects of Roman antiquity lately dug up at the station of Borcovicus—the first a statuary group, of which, however, a considerable portion had been detached, the main feature being a statue in the garb of a Roman legionary soldier, and two altars apparently dedicated to Mars by German soldiers serving in the Roman army in the Frisian battalion. Inasmuch as a Teutonic epithet is applied to the god, and coupled with him were two Teutonic divinities, it seemed expedient to the society to submit these objects to the consideration of the authorities of the University of Berlin. In the meantime Mr. Thompson Watkin, of Liverpool, author of "Roman Lancashire," a diligent and persevering antiquary, favoured Mr. Blair with a paper on this subject, which was read at the monthly meeting in January last. Subsequently he received an exhaustive paper from Professor Hübner, of Berlin, one of the learned men selected for the compilation of the great work, "Corpus Inscriptionum Latinarum," who is a perfect master of the English language, writes it correctly, and speaks it fluently. His paper was read at the monthly meeting in March last, and has since been revised by him and extended up to the present time. In the month of June last the resumption took place of the work of excavation at Borcovicus which was promised at our meeting in December last, when the first object discovered was the missing portion of the statuary group, being one side of it, and which was found to be less injured by time and exposure than the other side; and it is now clear that the martial figure had on each side of him a nude figure, apparently floating in air, holding in one hand a palm branch and in the other a garland or chaplet. The pencil of our colleague and secretary, Mr. Blair, has supplied us with an accurate drawing of this portion of the group, which, being engraved, has been added to the portion first discovered. The excavators next came upon a Roman well, filled to the brim, and to an extent of more than three feet above it with accumulated earth, in which was found a copious spring of pure water, affording one of many examples of the appreciation by the Romans of the numerous springs which gush from every hill and flow through every valley of Western Northumberland. The excavators then came upon two altars of hewn stone, very carefully finished, and ready to receive inscriptions. It seems to have been the practice of the priests of the pagan temples to keep in store blank altars till they met with a customer who would pay for the privilege of inscribing them. It will be remembered that in the well of the goddess Coventina there were found a dozen blank altars. On opening out the grass-grown ruins of the temple of Mars it was found that our utilitarian predecessors of the middle ages had removed for building purposes a large proportion of the building stones, leaving behind them some of the latter and a large heap of rubbish. The remaining stones have been removed and the rubbish examined without meeting with other objects. Several exploratory trenches were cut in various parts of the Chapel Hill, but no buildings could be found *in situ*, and the very foundation-stones have been taken up and removed. After four weeks of labour, the excavators took a final leave of the Chapel Hill of Borcovicus.

The Rev. Dr. Bruce said they were much obliged to Mr



Clayton for continuing these excavations and writing this paper. Men were still at work at the new series of buildings which were discovered at the Chesters two or three months ago, and which were coming out grandly.

The President said it must be a subject of unmixed satisfaction to them all that Mr. Clayton was still engaged in his antiquarian researches; in his ninety-third year he seemed to be as clear in his intellect and as acute in his researches as ever.

Mr. Thomas Hodgkin said these last discoveries at the Chesters seemed to be exciting a great amount of interest among Germans, as it was possible they might throw light on the social political condition of ancient Germany. The god to whom the altar was dedicated was called "Mars Thingsus." It was quite certain that Thing was the name of the old German popular assembly resembling our Parliament; it was called the *Folksthing*. The German popular assembly was specially under the control of the gods, and the priests had great influence to keep peace; and the impression was that "Mars Thingsus" was Mars who ruled the parliament. The two floating figures on each side were supposed to be divinities who maintained order and adjudged the prize in the popular assembly. This seemed fanciful, but it was the idea of the Germans, and this matter was exciting a great deal of interest among German scholars.

### THE DEVONSHIRE ASSOCIATION.

THE twenty-third annual meeting of the Devonshire Association for the advancement of science, literature, and art, was held last week in Newton Abbot. The following abstracts of some of the papers are taken from the *Exeter and Plymouth Gazette*:—

A report was read from the Committee on Works of Art in Devonshire, which commenced with a tribute to the memory of their genial and valued colleague, the late Rev. Treasurer Hawker, and an expression of the deep regret at the loss of one who took a warm interest in their work, and who, but for the illness which stayed his active pen, would have contributed to this year's proceedings. The committee continued their descriptive account of the works of art preserved in the public buildings and places in Exeter—a complete and detailed catalogue of the paintings and sculpture at the Bishop's Palace, the Devon and Exeter Hospital, the Workhouse and Offices of the Corporation of the Poor, the Grammar School, the Albert Memorial Museum, the Castle, the Hall of the Vicar's College, and on Northernhay and other public places in the city. By the time the monumental sculpture of the Cathedral and other city churches should have been similarly dealt with, the pages of their transactions would contain the most complete account that had been published of the public treasures of art in the Cathedral city. They hoped in another report to present a similar view of the public collections in the boroughs of the county. In this direction some progress had been made, the report containing notices of the portraits of public men in the town halls of Barnstaple, Torquay, Tiverton, and Torrington.

An interesting paper, giving "Notes on the History of Highweek," was read by the Rev. S. G. Harris, the rector of the parish. The history of this old parish, he remarked, could be traced back to the times of the Roman Invasion. It played important parts in the stirring times of the Conquest, and was then known by the name of "Teignwick." From MSS. which affected the parish, and other evidence, he had come to the conclusion that the highly-interesting Bradley House was built in the seventeenth century, and was probably the work of Richard Yard, who succeeded the family of Bussell, from whom the town of Newton Bushel derived its name. Some interesting information was given by Mr. Harris relative to Highweek Church since its dedication in 1428, adding that the mother church was at Kingsteignton. He gave a brief account of the religious provision for the district in ancient times before the building of the present parish church. The "chapel of Teynewick," i.e., the church which stood previously, where in its commanding and unrivalled situation Highweek Church now stood, was said to be mentioned in a deed of Bishop Brewer between 1224 and 1244; and again in a Bull of Pope Innocent III. in 1245. It was also mentioned in the "Taxation" of Pope Nicholas III. about the year 1288. Until the early part of the fifteenth century this ancient building enjoyed all parochial rights but that of sepulture, and this right was granted by Bishop Lacy, of Exeter, when the present church at Highweek with its burial-ground was dedicated to All Saints in 1428. It was somewhat uncertain when Highweek first became a parish, but probably between the years 1196 and 1244.

Mr. J. Brooking Rowe prepared a paper on the recent excavations made at Buckfast Abbey, which has been acquired by the monks of the Order of St. Benedict, and is being restored by them. The paper, which was read by Mr. R. N. Worth in the absence of its author, stated that the modern house at Buckfast, the ruins, the site of the abbey, and all the rights and belongings of the abbey had passed from private hands into the possession of the children of the Order above named, and that for the first time for nearly 350 years divine offices were again sung and said within

the precincts of the abbey of Our Lady of Buckfast on October 9, 1882. The monks, who were now in possession, belonged to a community founded by Father John Baptist Muard, which was expelled from France, and religious life had once more commenced in a place hallowed by the memories of more than ten centuries. At the time these monks first acquired the site they were not aware that they had become the owners of more than the modern house and the so-called Abbot's Tower. A very ugly temporary chapel was erected by them, and plans were drawn for a new church and conventual buildings. Fortunately, however, the monks were encouraged by Mr. St. George Mivart, who became interested in the matter, to undertake the work of excavation. The monks themselves carried out the task of unearthing the foundations under the direction of their companion and friend, the very intelligent and most courteous Father Hamilton, assisted by Mr. Frederick Walters, the architect of the community. The modern house was erected in 1806, and covered but a small space of the ancient site. It was built on the west side of cloister garth, and apparently but little of the monastic building was incorporated with it, the vaulted passage being the only part that could be identified. The whole of the foundations of the old abbey had been uncovered by the monks, and were found to be of a perfectly typical Cistercian foundation. The Duke of Norfolk had undertaken to restore the Abbot's Tower, and it was further proposed to re-erect on the lines of these unearthed foundations the abbey as it formerly existed, in the Perpendicular style.—Mr. Windeatt pointed out the importance of these excavations, and their results as affecting the discovery of the ruins of other abbeys. For instance, at present there was no trace existing of the old priory at Totnes, but if search were made the foundations might be found.—Lady Bowring asked whether the existence of any guest-chambers had been traced at Buckfast, as was the case at the abbey at Furness?—The Rev. Canon Brownlow said he was not aware that such chambers had been discovered. The abbey, he believed, dated as far back as the tenth century.—Mr. Worth said he believed the abbey existed previous to the tenth century, and that, with the exception of one or two houses in and near Exeter, it was the oldest religious establishment in the county.—Mr. Amery said that in many parts the turf only had to be removed to reveal the foundations of the abbey. If the site had been under tillage instead of in pasture, it was probable that the discovery would have been made long before.

### THE RESTORATION OF WESTMINSTER HALL.

A QUESTION was asked by Mr. Peddie in the House of Commons as to whether, having regard to the important effects which the proposed work on the west side of Westminster Hall would have on the architectural character of the group of buildings of which the hall forms part, and to the insufficiency of the opportunities which have been given for consideration of the designs, the First Commissioner of Works would postpone till next session submitting an estimate for the works, and would agree to the appointment of a Select Committee to consider the question of the best mode of dealing with the west side of the hall.

Mr. Shaw-Lefevre, in reply, said:—When I laid Mr. Pearson's plans before the House, about three weeks ago, I stated that if I found that there was likely to be serious opposition to them on behalf of members, I would refer the subject to a Select Committee. Since then I have been in communication with a large number of members in all parts of the House, and I find that there is a general concurrence of opinion favourable to these plans. There are some few exceptions, but that must be expected to any scheme; the general verdict, however, is certainly favourable. Under these circumstances I do not think it necessary to refer the question to a committee, and I shall ask for a vote during the present session to commence the work during the autumn. This is the more necessary as the walls of the hall were much injured during the past winter, and I am unwilling to expose them to the injury of another winter. There is, however, one part of the work which cannot be commenced at present, namely, the raising of the towers at the north end of the hall. The vote I shall ask for will not include any money for this purpose. This part of the work will stand over, and hon. members who object to it will have an opportunity of raising the question next year.

Mr. Peddie asked the right hon. gentleman whether he was aware that all the architectural journals had written strongly in disapproval of the designs, and whether he had not received from the Society for the Protection of Ancient Buildings an urgent request to postpone the matter until next year, in order that the public as well as the members of the House might have an opportunity of considering it.

Mr. Shaw-Lefevre said no doubt two architectural papers had written against the designs, but he observed that they were not unfrequently critical of such proposals. The Society mentioned had asked him to postpone the consideration of the scheme, to which it was not altogether unfavourable; and he would consult the architect with reference to some details, and would communicate to the House any changes therein.



The Rev. Prebendary Venables writes :—A great mistake was made when the law courts which masked the south wall of Westminster Hall were so hastily pulled down ; a still greater mistake will be made if Mr. Shaw-Lefevre's designs now presented to Parliament are carried out. I call the designs Mr. Shaw-Lefevre's rather than Mr. Pearson's, for though the architectural element is his, the essential features of the plan were imposed upon that eminent architect by the First Commissioner's somewhat ill-considered impetuosity in destroying buildings which might much better have been spared. Though in a different style than that now popular, they were admirable examples both of design and construction ; and, as members of Parliament have told me, they would have served a most useful purpose as additional committee rooms.

The demolition of Sir John Soane's law courts laid bare the long-unadorned flank of Westminster Hall, which, never being intended to be seen, and from the first probably hidden by the kitchen courts, and other domestic offices, of the palace, is as unattractive—I may be pardoned for saying, as ugly—as might be expected under such circumstances. The thankless task of making this long wall presentable was imposed on Mr. Pearson, and though my excellent friend has acquitted himself *à merveille*, and the two-storeyed cloister with which he proposes to conceal that which has been so unwisely revealed is in itself a beautiful composition, not even his genius can give a pleasing effect to a long, low building, standing, moreover, on a hill, surrounded by buildings of much greater elevation than itself. I repeat that the whole thing is a mistake. It will be far wiser to acknowledge that it is so than at great cost to perpetuate it and parade it before the eyes of the world.

The best thing to be done now is to cancel the existing plans, with all their excellences, and instruct Mr. Pearson to prepare designs for a building following the grand line of Kent's much-regretted Palladian front, leaving a courtyard between it and the south wall (it is a misnomer to call it the south front) of Westminster Hall, which will thus be perfectly accessible to all architectural antiquaries who may desire to examine the remains of Rufus's Norman hall, and the other relics which Mr. Pearson has so ably described in his very interesting report, but with its baldness masked from public view, as it was always intended to be.

Mr. J. J. Stevenson says :—The Government invite criticism on the plans for the restoration of Westminster Hall by their statement that no objections have been made to them. The plans are lying in the library of the House of Commons, where few can see them, where proper examination is difficult, and discussion of them is practically impossible. It would be an error to take silence for acquiescence. Of those who have seen them who may pretend to an opinion many are dissatisfied. It might be invidious for one architect to criticise another's works, but an architect's reasons for a restoration are fair subjects for argument.

Mr. Pearson has found a small piece of coping on one of the great flying buttresses, which, it may be admitted, marks the top of a building between them, and some grooves cut across these buttresses which indicate the position of a lead roof.

On this evidence Mr. Pearson builds a high two-storeyed cloister among the buttresses, shutting out them and the windows of the hall from view, asserting that this was the original design. But the coping and the grooves are of the rudest design, obviously not contemporary with the buttresses. The proof of this is that Mr. Pearson does not reproduce them in his restoration, but gives a proper parapet and roof of the period. They are too rude and occasional to be copied, and they are obviously no part of the original design, but a later addition which cuts into it anyhow. This piece of stone is far too weak and loose a peg to hang so large a building on. On his own showing, as proved by his plans, his evidence is unreliable and even false.

This might not matter if the new building were useful, though perhaps that should not be the first consideration in dealing with the most interesting relic of London. A use has to be found for it, and it is proposed to make it a carriage drive, which will be eight or nine feet below the level of the street outside. The upper storey, it is said, will be useful for keeping documents. The raising of the towers and the alteration of the north front, in order, as Mr. Pearson says, to bring it more into harmony with Barry's Westminster Palace, are questions of taste. But surely the hall should keep its own individuality and simplicity, and not copy the perhaps too exuberant ornament of the modern building.

Objections on grounds of taste and common sense might be made to the excrescence which is to jut out at the north-west corner of the hall, concealing it from approach in this direction ; but enough may have been said to show that some further discussion of the plans and some opportunity to the public of seeing them are advisable before the money is voted for them. The postponement for some months of the convenience of the semi-subterranean carriageway and the store for papers will not be a serious public loss.

The question is one of the most important of its kind. It involves the preservation of Westminster Hall, the completion of Barry's design of Westminster Palace, and additional accommodation for the House of Commons. If the original mediæval arrangement were followed, the space on this side of the hall

would be a court enclosed by buildings on the west. This was Barry's plan, and there is something to be said for it. It conceals the sunken condition of the hall, it would allow more of the ancient work to be left than would be proper if it is left open as the main front of a great building, and it would give additional accommodation, which is much needed. But, on the other hand, it would close up the open space which has been obtained between the hall and St. Margaret's Church by the removal of the law courts.

Another solution is to make the new cloister only one storey high. This would enclose the original Norman walling recently discovered, which Mr. Pearson wishes to preserve, and possibly some purpose could be discovered for it more useful than a carriage-way deep sunk below the level of the streets beside it. Other modes of treatment might, no doubt, be suggested. The question is a difficult one. There is a strong feeling among many, founded on good reasons, that the proposed solution is objectionable on many grounds. A little delay would be better than a wrong decision.

## BUILDING REGULATIONS IN SCOTLAND.

THE Bill which was introduced by the Government for the purpose of securing uniformity in public health legislation in Scotland has been withdrawn. It was so greatly altered by the Select Committee as to become a different measure. According to the *Glasgow Herald*, clauses 118-125 of the amended Bill relate to private streets. Several amendments have been made on these clauses. Clause 118 has been amended so that it is only lawful for commissioners to compel a badly-made private street "to be freed from obstructions and to be properly levelled, paved, or causewayed," &c., when and after "houses or permanent buildings" have been erected on "one-fourth of the ground fronting the same." As the clause previously stood, it was lawful for the commissioners to cause such streets to be put in similar condition when "they were formed or laid out." Clause 125 as first framed allowed private streets to be kept in order by temporary works where it was inexpedient that such streets should be causewayed or flagged, &c., to the full extent ; and it at the same time declared that such temporary works should "not be continued beyond a period of seven years." In the amended clause this period is extended to "fourteen years," and the earliest date at which such temporary works must be replaced by permanent paving is fixed at two years after the execution of the temporary works or any renewals thereof. Clause 141, which regulates the "width of streets," has been very much altered by the Committee. While the width of streets is nominally the main subject dealt with by this clause, the height of dwelling-houses and buildings is also determined by it. Before being amended, this clause dealt with "streets" only, and provided that no dwelling-house should be built on any street of a height exceeding "the width of such street." The amended clause, although no such change is intimated in the rubric, now deals with "courts," as well as "streets" ; and it increases the maximum height of dwelling-houses in "streets" and also in "courts"—by naming them together in this relation—to "one and a quarter times the width of such streets," and furnishes no clearer standard for determining the maximum height of houses in "courts." In other words, the effects of the change thus made upon the clause will be to increase the maximum height of buildings in the narrowest streets from 36 feet to 45 feet in height. This clause as originally framed further provided that in a mews or other lane of a given width—the minimum width being 12½ feet—in no case should the buildings in such lane "exceed the width of the lane" ; now the clause reads, "in no case shall the dwelling-houses fronting such lane exceed in height one and a half times the width of the lane." By this change the maximum height of buildings used as dwelling-houses in the narrowest of such lanes is raised from 12½ feet to 18¾ feet, and this limitation is now put upon dwelling-houses only. In order seemingly that the very fullest financial advantage might be derived from the amendment which thus increases the maximum height of buildings in streets, the clause has been lengthened by a new proviso determining that in cases where "a building is situated in two streets or courts of different levels the height shall be measured from the street which lies on the higher level. The Committee have apparently assumed that for all practical purposes in connection with building regulations as to height and free space "courts" and "streets" required identical treatment, and have accordingly deleted clauses 142 and 143 of the bill as remitted to them. The former of these clauses fixed the minimum clear "width of courts," and the increasing free space necessary in such as the houses became more numerous, in the buildings built round them, and it also determined for purposes of ventilation the minimum width of entrances to such courts, and fixed that these entrances should be "open from the ground upwards." The latter clause, 143, fixed the maximum height of houses in courts in relation to the width of the court "at its narrowest part." It appears far from clear that clause 141 can, as amended, in any measure carry out what these rejected clauses, 142 and 143, provided for in the way of regulating the height of buildings and the extent



of free space for light and air in "courts," as distinguished from streets. Clauses 146, 147, and 148 of the Bill dealt with the erection and removal of iron gates across courts and streets. 146 empowered Police Commissioners to erect such; and clauses 147 and 148 gave them power to cause property owners in such courts or streets to alter or remove them where they were obstructions to traffic. Where any such alteration was requested, in cases where the gates complained of had been erected by the consent of the commissioners, given either before or after the passing of the Act, the removal or alteration required was to be done at the public cost. In the amended bill the latter two clauses do not appear, and these contingencies are not now provided for. Clause 146, which alone remains, simply authorises the erection of such gates, and regulates their use. Clause 163—dealing with open space in rear of houses—has been a good deal altered by the Committee. As framed, it sought to provide against an ascertained defect in the Glasgow Police Act—the clause in which Act, regulating open spaces in back courts, has been constructed to mean, or at least sanction, the following peculiar arrangement as affecting free space for light and air in the rear of houses, viz.:—That in cases where a front and a back building, or ground sufficient to admit of the erection of two such buildings, belonged to the same owner, the free open space for both buildings might be one-half the extent of what would be required if such properties or ground had belonged to different owners. To meet this difficulty, and to secure proper free space for all buildings irrespective of the accident of ownership, the clause as first framed declared that the open space necessary for light and ventilation should "exclusively belong" to the building to which it was attached, the words "exclusively belong" have been deleted by the Committee, and the words "directly attached" have been put in their place. An important addition has also been made to this clause to the effect that in cases where buildings which have been once used for dwelling-houses and have been subsequently altered and used for business purposes, are "wholly or partly destroyed by fire," and the owner desires to re-erect them for dwelling-house purposes, it shall be competent for the owner to do so without reference to the restrictions of the clause as to open spaces; and the commissioners shall have power to enforce these restrictions only upon making compensation to the owner for the loss he may sustain in consequence of the operation of such restrictions; where the commissioners and owners fail to agree as to the amount of compensation to be paid, the amount is to be determined by the sheriff. Clauses 194-202 deal with the Dean of Guild Court. Before amendment clause 194 did not put "alteration of existing buildings" under the jurisdiction of the Dean of Guild Court; the clause as amended does so. As originally drawn this clause provided that "nothing herein contained shall be taken to restrict the jurisdiction of any Dean of Guild Court existing at the commencement of this Act," it now provides that "nothing herein contained shall be taken to restrict or augment the jurisdiction," &c. Clause 195 provides for the establishment of such courts in burghs where none existed at the commencement of the Act, and clause 196, when specifying the constitution of such court, strangely omitted to name as one of its members the Dean of Guild in burghs having a Dean of Guild. This omission is rectified in the amended clause. Clause 198 as drawn opened with the declaration that "the Town Clerk of a Royal or Parliamentary burgh shall be clerk of the Dean of Guild Court." The amended clause is shortened by omitting all allusion to the "Town Clerk." These are the main points in which differences occur in this group of clauses. Among the clauses relating to sewers few amendments have been made. In clause 226, relating to distilleries or other works, the definition of prohibitory matter originally covered what was "offensive or dangerous to health," it is now limited to what is "injurious to health." The section of the Bill dealing with drainage of houses has had a new clause added (225A) providing for the proper ventilation and trapping of all house drainage; and the clause (236) empowering the inspection of drains and cesspools by the surveyor is now amended by making it imperative that he "shall inspect any drain or cesspool or reservoir when requested by the medical officer of health or the sanitary inspector."

### ARCHÆOLOGY IN KENT.

THE members of the Kent Archæological Society held a meeting in Sevenoaks and the neighbourhood on Wednesday and Thursday in last week. Thirteen years have elapsed since the former meeting was held there. The annual report stated that during the year forty-six members had joined the society. It was expected that the volume on Church Plate in Kent might be issued in the course of next year. Descriptions of nearly two hundred sets had been received, making four hundred in all. Earl Sydney, Lord Lieutenant of the county, was elected president.

Sundridge Church, near Brasted, was first visited, and was described by the Rev. Canon W. Scott. The body of the church is Early English, but, with the exception of those in the clerestory, the windows are Perpendicular. There are Early English arcades

north and south of the nave, each of three bays, and clerestory of small quatrefoil windows. The loftiness of roof occasioned by the clerestory, and the grace of the lofty arcades, gave a character to the building. Traces of the shafts of an Early English east window might be seen at the sides of existing Perpendicular windows of five lights. The aisles were both of them raised during the fifteenth century; they and the tower were of the Perpendicular style. Traces of the earlier aisle roof beneath the clerestory window would be seen in the south aisle. The doorway of the rood loft stairs remained in the south chancel at its west end. In the north chancel, at the east end, was the altar tomb of John Isley, sheriff of Kent, who died in 1484; the conventional Tudor flower was seen upon its cresting. The brass effigies of Roger Isley, who died in 1429, and his wife were at the back of the tomb.

At Squerries Court, near Westerham, the members were received by Lieutenant-Colonel Warde. It is a seventeenth century red brick mansion, and is interesting from its connection with Wolfe. It was while in the grounds that he received his commission as major-general, with command of the expedition to North America.

The church of St. Mary, Westerham, was described by Mr. G. Leveson Gower. Few churches had, he said, a more beautiful situation, standing as it did on the edge of the hill with its three gables facing the valley below. In the grant to the Prior of Convent of Canterbury on June 18, 1290, it was spoken of as the "church of Westerham, with the chapels belonging to it." No portion of it was earlier than the thirteenth century, and no traces of any Norman work had been found during the restoration, and it was fair to infer that the first church there was the work of the Early English builders. A general scheme of alteration and enlargement took place towards the end of the fifteenth century, and the nave of the south aisle was built probably at the same time. The roof of the nave and south aisle was worthy of attention; it was a good example of the waggon roof of that date. The present reredos was erected by Lady Harriet Warde, in memory of Colonel Warde, her husband, and the tracery and painted glass of the east window were erected by his friends in memory of the late Edward Streatfeild, a grandson of a Kentish antiquary. The church has some monumental slabs, one over the south entrance being to the memory of General Wolfe, who was, however, buried in Greenwich.

Chevening, the seat of Earl Stanhope, was afterwards visited. It was built in 1630, and the design is supposed to have been after one by Inigo Jones. In the grounds are some Roman remains, which were brought over from Tarragona by General Stanhope. The church contains several interesting monuments, including the well-known recumbent figure of Lady Stanhope, who died in 1823, by Chantrey.

In the evening the members dined in Sevenoaks, under the presidency of Earl Stanhope. On the following day there were visits to Otford, Lullingstone, and Tilston.

### VENTILATION IN CONNECTION WITH WARMTH AND LIGHTING.\*

BY CAPTAIN DOUGLAS GALTON, C.B., LL.D., F.R.S.

IN this lecture I propose to endeavour to explain what are the principles which should guide us in warming our houses, and then to endeavour to show how those principles can be usefully employed in practice. We must all agree that our present arrangements are inconvenient in certain respects, so far as our towns are concerned. When we bring a large number of houses together, as we do in our great cities, the methods which we adopt for warming our houses conduce to the production of a very large amount of smoke and pollution of the atmosphere. The amount of coal which we burn is out of all proportion to the heat which we produce. Therefore, in our towns, the methods to which we resort for warming our rooms load with impurities the air which we have to breathe. Those who have been born and have lived in the heart of London, do not know what the feeling is of breathing fresh invigorating country air. The question is: how can we alter this? The first step towards alteration is to know what conditions we want to obtain. We will consider, in the first place, what advantages our present methods of warming secure for us; and next, how we can secure these in ways less hurtful to our atmosphere.

The open fire is the most favourite method of warming. So far as the production of heat is concerned, it is also the most wasteful. One pound of coal is more than sufficient, if all the heat of combustion is utilised, to raise the temperature of a room 20 feet square and 12 feet high, to 10° above the temperature of the outer air. If the room were not ventilated at all, and the walls were composed of non-conducting materials, the consumption of fuel to maintain this temperature would be very small; but we must

\* A paper read at a Conference at the International Health Exhibition.



change the air of the room if we are to live in it, or else the act of breathing would render the air so impure that we should die. The air which passes out of the room to make way for fresh air is warm, and carries some heat with it; the fresh air which comes in, if cold, absorbs heat, which brings up its temperature to that of the room. All this entails a development of additional heat. For instance, if the volume of air contained in the room above mentioned were changed every hour, one pound of coal additional would be required per hour to heat the inflowing air, so that to maintain the temperature at  $10^{\circ}$  above that of the outer air during twelve hours would require 12lb. of coal. Besides this, there is a continual escape of heat going on through the walls, windows, ceiling, &c., and thus the mere circumstances of occupation of a room entail a greater consumption of fuel than the mere 1lb. of coal in order to maintain the temperature. But the open fire consumes much more than would be necessary to keep up the heat. The principle of the ordinary open fireplace is that the coal shall be placed in a grate, to which air is admitted from the bottom and sides to aid in the combustion of the coal; and an ordinary fireplace, for a room of 20 feet square and 12 feet high, will contain from about 15lb. to 20lb. at a time, and, if the fire be kept up for twelve hours, probably the consumption will be about 100lb., or the consumption may be assumed at about 8lb. of coal an hour. But the consumption of fuel enables the open fire to perform other functions besides those of warming. It is a great engine of ventilation. One pound of coal may be assumed to require, for its perfect combustion, 160 cubic feet of atmospheric air; 8lb. would require 1,280 cubic feet; but at a very low computation of the velocity of the gases in an ordinary chimney-flue the air would pass up the chimney at a rate of from 4 feet to 6 feet per second, or from 14,000 to 20,000 cubic feet per hour; with the chimneys in ordinary use, a velocity of from 10 feet to 15 feet per second often prevails, giving an outflow of air of from 35,000 to 40,000 cubic feet per hour.

We have, therefore, to consider the open fire in two aspects:—  
1. As a method of warming; 2. As an engine of ventilation. In its aspect of warming, the radiant heat from the fire does not warm the air of the room; the rays from the fire warm the sides and back and parts adjacent to the grate, they warm the walls, floor, ceiling, and the furniture of the room, and these impart heat to the air. The form and material of the fireplace can thus assist materially the warming of the air. The rays should impinge more freely on the walls and floor than on the ceiling. A projecting chimney-piece, with a surface favourable to the absorption and emission of heat, would be more favourable to the warming and circulation of the air than one which would allow the rays to pass to the ceiling. In an ordinary fireplace the sides should be splayed, as in the Rumford form of grate; the sides and back should be of non-conducting material, with a surface favourable to the rapid absorption and emission of heat. Thus brick or tiles are better than iron for this purpose. Similarly, the degree to which the materials of the walls or floor of the room are unfavourable to conduction, but favourable to the absorption and emission of heat, will have a bearing on the capacity of the room for warmth. The open fire, moreover, has this advantage—that a person can obtain just as much or as little heat as he desires by placing himself in front of the fire or at the side. There is, however, this inconvenience about the open fire. The large volume of air drawn out of a room by the chimney must be supplied from somewhere, and consequently the very means adopted to heat the room tends to produce draughts, because the stronger the direct radiation, or rather the brighter the flame, in open fireplaces, the stronger must be the draught of the fire and the abstraction of heat.

Let us next consider what are the conditions which we require for comfort. The normal temperature of the human body is  $98^{\circ}$  deg. Fahr. If it rises much above or falls much below that, death will ensue. But the human body is a furnace in which the process of combustion is continually going on. Therefore, in order to preserve the normal temperature, the body must continually give off a certain amount of heat. By the laws of radiation, a heated body parts with its heat more or less rapidly in proportion to the low or high temperature of bodies near it. Thus, if a hot body be placed near a cold body, the hot body will radiate heat rapidly. If the hot body be near a body less hot than itself, but still hot, it will part with its temperature slowly. Let us apply this to a room. If you are sitting in a room near a cold brick wall, you feel what you think is a draught. It is not necessarily a draught at all. But the side of your warm body turned next the wall parts with its heat rapidly, and you experience a local chill. If you hang a piece of carpet against the wall, the draught is no longer felt because the carpet checks the rapidity of the radiation. Now, the chief source of heat in the open fire is its radiant heat, and as it warms the walls of the room and the furniture, it takes off any sensation of chill from the walls, &c., although the air may be comparatively cool. You must next bear in mind that the proportion of radiant heat to the total heat given out by a heated body depends on the temperature of the body. Thus, with a red-hot piece of iron, or a flame, the great part of the heat given out is radiant heat; whereas, with a body heated to from  $150^{\circ}$  deg. to  $200^{\circ}$  deg., like a hot-water pipe, a comparatively small proportion is radiant heat. Therefore, when you heat a room

by means of hot-water pipes, or by means of warmed air, the walls do not get warmed in the same proportion, and although the air may feel warm, the walls may remain cold, so that the heat of the body may be radiated to the walls and give the sensation of chill.

I confess that personally I think there is nothing to be compared with what my friend, Sir F. Bramwell, calls the pleasant, pokeable fire. But I do feel most strongly that, however much private feelings may incline us all to use the open fire, it is our duty, now that our towns are becoming so vast, to adopt some method of heating which will produce less smoke. It is not as if there was any probable and early limit to the size of London or of other large towns. They grow continuously, and London has progressed at the same steady rate since the beginning of this century. In 1851 it contained a little over 2,000,000 inhabitants, and was looked upon as vast and abnormal. It now contains 4,000,000, and is steadily increasing. The smoke destroys our light, it injures our air, it ruins our furniture, our pictures, our decorations, and with the increase of London, this must go on in an accelerating ratio. But it requires education in the people to get rid of it. The Smoke Abatement Society, under the chairmanship of Mr. Ernest Hart, sounded the first note against this gigantic evil. In response to the demand then made, many new forms of fireplace were proposed; but the practical conclusion to be derived from that exhibition was that so long as we burn our fuel in the raw state in our rooms and in our kitchens, we cannot get rid of smoke. The main object of the present exhibition is to educate the people in the science of health. The public has long felt the want of pure water, and has obtained a supply of comparatively pure water in the metropolis. The public has not yet become fully alive to the necessity of pure air. It is our business at this exhibition to endeavour to awaken the public mind to this want. So far as purity of air depends on removal of refuse from our midst, there is hope that in that respect this object may be attained, although no doubt even this simple question is much neglected. Dust is generally removed in open baskets, and emptied into open carts, in a manner which seems to have been designed for the purpose of scattering it as much as possible into the surrounding atmosphere. But the purity of air which depends upon the absence of smoke is another matter, and I fear that it will be many years before the selfishness of the community will give way on this point.

The first point to consider is, if we dispense with the use of the open fire, how can we obtain that comfort which the open fireplace gives. The comfort of the open fire is due to the warmth it imparts to the floor, the walls, and the furniture. The air of the room is warmed, not by the rays from the fire, but by the warmth imparted by those rays to those various objects. Therefore the air of the room is somewhat cooler than the walls. Now there is undoubtedly greater exhilaration produced by breathing cool air than by breathing warm air. This is readily accounted for. One cubic foot of cold air at  $32^{\circ}$  deg. Fahrenheit contains more oxygen than one cubic foot of expanded warmer air at  $32^{\circ}$  deg. Fahrenheit does. It is thus desirable that air admitted to a room should not exceed from  $55^{\circ}$  deg. to  $60^{\circ}$  deg. temperature, for comfort in breathing. This will at once explain to you why the employment of warmed air alone to warm your houses does not give comfort. If the warmed air is admitted at a comfortable temperature for breathing, viz., about  $55^{\circ}$  deg., the walls, which derive their heat from the air, will be somewhat below that temperature. The discomfort is caused by the warm body radiating its heat too rapidly to the colder walls. Therefore, if you are to abandon the open fire, but retain its comfort, you must warm the walls and floors, &c., of your rooms. If you can maintain your walls, floors, and ceilings, at a temperature of from  $55^{\circ}$  deg. to  $65^{\circ}$  deg. combined with an adequate change of air, you will not experience much inconvenience from the loss of the open fire, however much you may regret its companionship and its pokeableness.

There are four ways in which we may effect this. In three of these ways one fire in each house in a central position would be used. In the fourth the heat would be applied in the room itself by means of gas. It is probable, however, that a combined arrangement would be desirable. In all the cases where the heat is furnished from one fire, this fire would be in a close furnace for warming each house, or self-contained block of buildings; and thus the fire could be so arranged by means of self-feeding apparatus to be practically smokeless. The heat from the fire would be conveyed to the various parts of the building by hot air, hot water, or steam. Where warmed air is used, it would be necessary to adapt the house in its original construction to the purpose, because the air would have to flow up, through spaces in the walls, from the basement. Moreover, it would not be economical to bring up the air in the outside walls, because then nearly half the heat would pass direct to the outer air. The warmed air passing up the central walls of the house would part with some of its heat to the walls, and would thus enter the room at a lower temperature than that of the walls. In order to draw up the warm air into the rooms, it would be necessary to have some means of extracting the air from the room, so as to draw in the warmed air. It would not always flow in of itself in this country. Thus you see that the warming by means of fresh air involves ventilation, and moreover requires, if it is to be thoroughly efficient, that your architect



should have thought out the whole problem when he first plans the house, and before you build it; otherwise you are met with difficulties at every turn. In the method of heating by hot air alone you have this further consideration. The air in the heating chamber is necessarily at a given temperature, and your house is thus heated uniformly; but it may happen, in this climate especially, that you may want one room to be warm whilst another is cool. It is generally on this account that other methods of heating have been preferred. It is to these methods of heating that I would now direct your attention. These methods are hot-water pipes, or steam pipes, led from the fire, which is placed in some central position, and arranged to accumulate the heat in those rooms or other places which it is desired to heat.

I will at once say that the arrangements hitherto made of warming by either hot-water pipes or steam pipes have not fulfilled the conditions I have mentioned as being necessary to supply the comfort of the open fire. The method adopted is to accumulate a certain amount of heating surface in a coil or nest of pipes, or in what is termed a radiator in the United States; but the plan of distributing the heat by means of a large flat surface placed close to the wall has been generally adopted. I do not wish to imply that it has not been thought of, because some few years ago, in an exhibition of sanitary appliances held at the Society of Arts, Mr. Pritchett, of Bishop's Stortford, suggested something of the sort. The apparatus consists of a series of receptacles, or cases, for water. The cases themselves were formed of ordinary plates of corrugated metal, strongly put together, but having a small interval between them so as to unroll the water, as it were, into a film, and form a succession of reservoirs of water, about 30 inches in height, more or less, as is required, but only from  $\frac{1}{2}$  inch to 1 inch in thickness, enabling them, therefore, to be placed continuously as a dado, or as a series of panels, round any room or building intended to be warmed, and occupying scarcely any appreciable portion of the space of the room or building. The corrugated form given to these reservoirs not only increases the area of the external surfaces, back and front, and imparts strength to the vessels, but secures a certain amount of friction in the action of the warmed water within the vessels, which predisposes it to part with its heat during its circulation. I have never seen this applied in practice on a large scale. These panels might conveniently form the dado of a room, and if of 6 feet high, would insure the comfort of the occupants of the room, as they would effectually prevent persons in the room from radiating the heat from their persons to the surrounding walls. Such panels all round the room would especially lend themselves to warming fresh air to be admitted into the room. Mr. Pritchett proposed that these should be warmed by the circulation of hot water; but it is certain that it would be more advantageous to employ steam to heat them if they were established on a large scale. In England steam is not much employed for heating. We are prejudiced against it. We fear accidents. It is, however, a method of conveying heat which is eminently suited to use on a large scale; and if we are to hope to abolish our smoke nuisance, it is by methods of heating on a large scale only that we may succeed. Steam heating is extremely simple in its application. Steam is easily led to great distances. Steam-heated pipes are hotter than hot-water pipes, therefore their effect in warming the air in contact with them is also greater; and, therefore, when heating is required on a large scale, it will be found that it is more economical to use steam pipes than hot-water pipes; besides which, the pipes may be smaller, and thus in both ways expense is saved. Highly heated steam-pipes, moreover, radiate a large portion of their heat to the walls and furniture of a room.

Heating by steam is universal in the United States, and the usual system may be described as follows:—The steam is conveyed from the basement along pipes to the room or passage where it is wanted to be used, and there it is passed into a cluster or coil of pipes called a radiator, which gives an enlarged heating surface. The cause producing the circulation throughout the pipes of the warming apparatus is solely the difference of pressure which results from the more or less rapid condensation of the steam in contact with the radiating surfaces; a partial vacuum of greater or less amount is thereby formed within the radiating portions of the apparatus: and the column of steam, or of water, equivalent to this diminution of pressure, constitutes the effective head producing the flow of steam from the boiler; while the return current of condensed water is determined by the downward inclination of the pipes for the return course. Therefore, the flow-pipe should be carried in as direct a line as possible from the boiler to the highest point; all the coils for heating should be placed on the return pipe, which should be laid in a uniformly descending line back to the boiler, so arranged as to prevent the lodgment of any condensed water on its way there; because if condensed water lodges in the pipes most unpleasant and startling noises result. It is a source of economy in steam heating that the condensed water should flow back to the boiler. This is what is called closed circulation, with separate supply and return mains, both of which extend to the furthest distance to which the heat has to be distributed. It is, however, possible to carry the steam and bring back the condensed water by means of a single main, which answers at once for both the supply and the return, either with or without a longitudinal parti-

tion inside it for separating the outward current of steam supply from the return current of condensed water. If more convenient, the return of the condensed water to the boilers may be dispensed with, and the steam may be applied in what is called the system of open circulation, where a supply main conveys the steam to the radiating surfaces, whence a return main conducts the condensed water either into an open tank for feeding the boiler, or into a drain to run to waste, or for use as hot water, the boiler being then fed from some other source; in either case suitable traps have to be provided on the return main, for preserving the steam pressure within the supply main and radiators.

The difficulty of steam heating lies in regulating the temperature of the pipes. With hot water you can have your pipes heated to anything you like from 50° to 180°; but with steam pipes it is different. The heat is got up very rapidly when the steam is turned on, and goes off very rapidly when turned off. There are various arrangements for regulating steam heating when applied to warm inflowing air. In the New York Hospital the incoming air is warmed by coils of steam pipes, and generally to a considerable temperature; but in order to prevent the warmed air entering the wards at too high a temperature, this hot air is passed into a mixing chamber, to which cold air can be admitted at will, so that the hot air can be mixed with cold air to the extent necessary to moderate its temperature before it is allowed to flow into the wards. There is, however, one great advantage possessed by coils of steam-heated pipes: they give out a larger proportion of radiant heat to the walls than is given by hot-water pipes. You can easily understand how much simpler it would be to warm Mr. Pritchett's dados and wall panelling by steam pipes carried through them instead of by hot water.

The next way in which heat can be applied is by means of gas. A gas jet warms any surface in contact with it. If, therefore, you enclose a gas jet in a metal case, and if you bring air to feed the gas burner from the outer air, and carry away the products of combustion also to the outer air, you can use the heat of the metal case to warm the surrounding air in the room, whilst the fumes of combustion from the gas will be taken outside and do no harm to the air of the room. Gas jets might thus be applied with the greatest ease to warm Mr. Pritchett's dados and wall panels, the gas jets being placed inside the dado, and the products of combustion carried to the outer air. Mr. Boyle has invented a very efficient method of applying gas to warm inflowing air at an ordinary ventilator. It is in use at the Guildhall. The fresh air inlet has placed in it a pipe which is coiled round. A gas burner is placed at the bottom of the pipe, separate from the air of the room; the products of combustion pass up the coiled pipe and then down and out to the open air, the pipe being warmed by the heat they give out in their passage, and the fresh inflowing air being warmed by the pipe. Of course, in all these arrangements air must be extracted by flues or fans or some other method, so as to insure a due circulation of air. But however advantageous gas may be in the methods of its application to warming, and I do not hesitate to say that it can be easily applied so as to be hygienically perfect in that respect; moreover, you can apply your heat at the exact point at which you want it. You can so arrange it as to give out a low degree of heat for warming fresh inflowing air, or to give out heat to warm your dados and prevent your own body losing its natural heat too rapidly by radiation; or you can use it to give out a high degree of heat, and thus to furnish radiant heat to warm you by direct radiation. It has only to be carefully adjusted to produce all these advantages, yet there is this enormous drawback to its use. At the price of 3s. 6d. a 1,000 cubic feet, it would cost to effect these things about four times the price of coal. I believe that if it could be supplied so as not to exceed double the price of coal, it might be economical to use it, because you can use it when and where you desire it. You can turn it off when you leave your room, and turn it on again when you return, and in this climate, where our changes of temperature in winter are so rapid, a uniform heat applied everywhere often becomes oppressive.

Let us consider for a few minutes what is the meaning of revolutionising the methods of warming our houses in the way I now propose. We should not load our atmosphere with soot. Each of the fires in a house requires its separate chimney; and as if the householder were determined to do all in his power to make the atmosphere impure, smoke which is arrested in the chimney flue in the form of soot is periodically pushed up out at the top of the chimney into the air, not only to the detriment of the occupier of the house, but to that of the neighbours—an arrangement which may be witnessed any morning in houses where chimneys are being swept. These inconveniences result from having separate fires in every house, and for each separate object. Let us consider for a moment the amount of labour and expense entailed by the mere supply of fuel upon this separate system. Take, as an example, one house of moderate size. The consumption of coal at a low calculation will be twenty-four tons a year, which would require twelve carts to convey it to the houses; or a street such as Eaton Place would require 12,000 carts to supply it with coal. These carts entail the presence of between 2,000 and 3,000 horses, and each horse causes, by the manure it deposits in the street, an additional pollution of our atmosphere. When the coal is placed in the house,



these twenty-four tons require to be carried up in coal scuttles, each holding probably a quarter of a hundredweight. That is to say, that there would be to be carried from the cellar to various parts of the house nearly 2,000 coal-scuttles full of coal. The residue would have to be carried down again in the shape of ashes, probably to the extent of 400 coal-scuttles, independently of the proportion of ashes which get scattered from the fireplace about the room, and have to be cleaned up by the housemaid. In addition to this, the dirt engendered by the smoke and soot sent up into the atmosphere renders much additional cleaning necessary, and entails on the inhabitants of London a vast expenditure on soap, and on repainting and redecorating our rooms. Indeed, the late Miss Garrett, who was celebrated for her skill and taste as a decorator of houses, told me she had no sympathy with the movement for the abatement of smoke, because she looked upon smoke and fog as specially sent by Providence for the benefit of decorators. The labour thus entailed is wasted force. It entails vast unnecessary labour and waste of fuel. Probably, if the price of coal had remained high, as in 1875-6, we should ere now have begun to warm our houses in a more rational way. But it is not on the ground of economy that I advocate a change. It is on the ground of purity of air. So long as we pollute the air with soot, not only is the outside air impure, but the air is so loaded with dirt that the careful householder excludes it from his rooms where possible. You would all be ashamed to supply your guests at a party with bad water. If you were equally ashamed, which you ought to be, to supply them with bad air, we should soon take measures to build our houses so as to keep up a continual flow of fresh air throughout our rooms. And then we should be rapidly compelled to take measures also for warming our houses in a way which would not pollute our atmosphere.

## LEGAL.

Warwickshire Assizes.—Aug. 1.

(Before Mr. JUSTICE SMITH.)

W. WYKES v. G. H. MACDERMOTT.

ARCHITECT'S FEES.

This was an action by Mr. Wykes, architect, Birmingham, against Mr. Macdermott, a music-hall singer, for the recovery of 529*l.* for preparing plans, taking out quantities, and superintending work in connection with the erection of a theatre in Birmingham. The defendant wished to erect a theatre in which intoxicating drinks should not be sold, and which alternately was to be used for dramatic and music-hall entertainments. With the co-operation of Mr. Bennett, a builder, a site was selected in Corporation Street. An architect was required, and the plaintiff was engaged, being introduced by Mr. Bennett. Mr. Wykes considered the matter, and made some sketches. After going to look at the site Mr. Macdermott and Mr. Bennett instructed the plaintiff to prepare a plan. Defendant thought that the plaintiffs should look at one or two buildings, and he went there with defendant and Mr. Bennett. Two days were spent in this way. Drawings were afterwards prepared, which were submitted to Mr. Macdermott. On June 9 there was an interview in London with the defendant, and on June 28 defendant wrote to the plaintiff stating that every effort must be made to push forward the theatre, as they must open by Christmas, adding, "I have written to Mr. Deakin, to know how we shall send the first 500*l.*, so that there need be no delay." On July 4 Mr. Macdermott wrote to Mr. Bennett, asking him how matters were getting on, as they must open on Boxing Night, or it would have to be postponed until the autumn of the following year. In that letter he also enjoined upon Mr. Bennett the desirability of not forgetting to apply for the licence, and to make them understand that this was to be a temperance theatre for the people, and that the undertaking could not be limited. Ultimately Mr. Bennett was obliged to stop the work for want of funds, and his creditors supposing there must be something wrong, he was obliged to file his petition on September 28. Subsequently another theatre was built by another person under different circumstances. The negotiations between plaintiff, Mr. Bennett, and Mr. Macdermott came to an end, and the present action was brought.—Mr. Wm. Wykes was then examined, and confirmed his counsel's statement. In cross-examination, plaintiff said that the matter was first mentioned to him by Mr. Bennett on March 23. He would swear that before March 1 he was not in correspondence with Mr. Bennett. Defendant told him he had got a splendid idea, and took witness to look at the land. His first instructions in the matter were undoubtedly received from Mr. Macdermott. He learned afterwards that Mr. Bennett was interested. Mr. Bennett failed for a considerable sum—nearly 25,000*l.* He believed Mr. Bennett had 450*l.* worth of materials on the place when he failed. He did not send in his account for the money he was now suing for.—Mr. Sharp spoke to being present when the conversation took place, and to the defendant saying he should like some one to join him in the project, and Mr. Bennett

said he would do so. He also spoke to being present when the plans were discussed in the first instance, and on that occasion both Mr. Bennett and Mr. Macdermott suggested alterations.—Mr. W. T. Bennett, builder, Birmingham, gave evidence as to joining the defendant in the project. It was at witness's suggestion that the plaintiff was engaged in the work. Witness expended altogether between 700*l.* and 800*l.* In consequence of the matter coming to a standstill he was obliged to file his petition. In cross-examination witness said that Mr. Wykes knew he was interested in the matter from the beginning. When he failed his liabilities were 22,000*l.* and his assets 20,000*l.* Mr. Wykes was a debtor to the estate to the amount of 500*l.*

The defendant in his evidence said that from his great experience in the country he conceived the idea that a temperance theatre would be highly acceptable to the middle classes of Birmingham. He denied that he ever gave any instruction to the plaintiff to do the work. The matter was simply talked of in a friendly way. Witness did not say he should like to have a plan to see what could be done. He never gave plaintiff instructions to get out plans of the land in Corporation Street. In cross-examination he absolutely denied having anything to do with the scheme. Whatever he did was contingent upon his being made a partner in the concern, and he was not to pay the 500*l.* until the partnership deed was drawn up.—Mr. Deakin, Mr. Bennett's solicitor, also gave evidence.—His Lordship summed up in favour of the plaintiff, and the jury almost immediately returned a verdict for the plaintiff.—His Lordship directed that the reasonableness of the charges should be referred to a competent surveyor.

## ART WORKMANSHIP.

**Augustinian Memorial.**—A Saxon cross, reproduced from one at Sandbach, is to be erected at Cottington, near Ebbs Fleet, in the Isle of Thanet, which is said to be placed where St. Augustine landed on his mission to England. The cost will be defrayed by Earl Granville, Lord Warden of the Cinque Ports. The west front exhibits the Christian legend. On the encircled cross at the head of the shaft are the four emblems of the Evangelists. On the panelled shaft below are represented the Annunciation, the Virgin and Child, the Crucifixion, and the Transfiguration, with demi-figures of saints and angels. On the north side the theme is continued by figures of the twelve apostles, each bearing his appropriate emblem, Judas being shown with a beast's head, as was the common practice in early symbolism. On the south side are a series of fourteen figures of early Christian martyrs, commencing with St. Stephen, and following with SS. Bartholomew, Agnes, Sebastian, Margaret, George of Cappadocia, &c., also with characteristic emblems. The east front of the circular cross is filled in with Runic ornament, which continues nearly half-way down the shaft, when the design breaks into diamond-shaped panels, filled with figures in the following order:—"St. Alban, the proto-martyr of England" (A.D. 303), "St. Augustine, attended by Monks," and "Ethelbert, King of Kent." The shaft, a monolith about twelve feet high, has a bold cabled beading on its four angles, and between that and the panels, on the two wider faces, is an elegant pattern of the string ornamentation so often met with in Runic carving. Including the base and cross, the monument rises to a height of about twenty feet. With the possible exception of some of the figures, it is a strict imitation of the original at Sandbach. The stone is from the Doulting quarries. The cross is the work of Mr. Roddes, of Birmingham.

## ARCHÆOLOGY.

**Britanno-Roman Inscriptions Discovered in 1883.**—Mr. W. Thompson Watkin has published a report on the inscriptions discovered in Britain during the past year. The discoveries include an altar of some interest found at Hale, in West Cumberland, two milestones at Llanfairfechan, and an altar with a most curious and puzzling inscription at the great camp of Borcovicus (Housesteads) on the Wall. The inscription, as read and expanded by Mr. Watkin, runs:—"Deo Marti Thincso et duabus Alasiagis Bedæ et Funmiterræ et Numini Augusti Germani cives Tuihanti votum solverunt libentes meritis." This, or rather the companion and almost identical inscription on another altar found at the same place, has already been discussed by Mommsen in the latest number of *Hermes*, and Mr. Watkin himself has contributed an essay on the subject to the *Bulletin Epigraphique de la Gaule*. Mr. Watkin takes "the two Alasiagæ" to be "local goddesses of continental *pagi*," called, after places in those *pagi*, Beda and Fimmilena. He further suggests that in the name of these deities we have the germ of the name for Alsace. He omits, however, to notice the fact that the old High German "alah"—"holy"—occurs in other similar words. Thus we have "Matres Alatervæ," "Matronæ Alagabiæ" (elsewhere simply "Gabiæ" without the prefix) on inscriptions found in the Rhine district.



### CHURCH BUILDING AND RESTORATION.

**Jamesley.**—St. Andrew's Church has been reopened after undergoing renovation. The whole of the work has been designed and superintended by Mr. Robt. J. Johnson, architect, of Newcastle-upon-Tyne, and executed by Mr. Ralph Sanderson, builder, of that city.

**Northfleet.**—The memorial-stones of a new mission chapel, at Lower Northfleet, have been laid. The chapel is being erected by Mr. Tuffee, builder, of Gravesend, from the plans of Mr. Bell, architect, of London.

**Chatham.**—The memorial-stones of a new chapel have been laid. The building is calculated to accommodate about 300 persons, and there will be school accommodation for 250 children attached to it. Mr. C. E. Skinner, of Chatham, is the builder, and the plans are by Mr. J. Kingwell Cole, of London.

### NEW BUILDINGS.

**Workington.**—For several months the Workington petty sessional business has been conducted in a building in Washington Street, owing to very extensive alterations and enlargements which have been going on at the police station and courthouse in Nook Street. Ten new cells have been made in the station, and the courthouse has been very much enlarged and thoroughly renovated. It is now large and airy, and has been arranged with a view to securing the greatest comfort and convenience to all who have business to transact at the place. The bench is well elevated, and has ample space for the passing to and fro of the magistrates. Leading off one end of it is a commodious retiring-room, with a private entrance from Pinfold Street. The magistrates' clerk's table and table for the superintendent and inspector of police are immediately below the bench. In front of this is the solicitors' table, with the witness-box on one side and the prisoner's dock on the other. Immediately behind the solicitors' table and facing the bench is the reporters' table, which is sufficient for the accommodation of seven or eight reporters. The woodwork is all of carved and panelled oak, and has a light, cheerful appearance. The work has been carried out under the supervision of Mr. R. S. Marsh, surveyor to the Cockermouth Local Board, from plans and specifications by Mr. Cory, Carlisle, the county surveyor. The building is now one of the best court-houses in West Cumberland. It has been completed within the last few days, and was formally opened.

**Bolton-le-Moors.**—In the year 1870 the sum of 30,000*l.* was left by the late Mr. Stephen Blair, of Bolton-le-Moors, to build and endow a convalescent hospital near that town, under the condition that if a site was not given or provided within a fixed time the gift would lapse, Mr. Blair not being legally able to leave money for the purchase of land, and the money would go to the family of the testator's brother, Mr. Harrison Blair. The trustees are Mrs. Harrison Blair, the Rev. Canon Powell, Mr. C. Wolfenden, Mr. Thomas Glaister, Mr. W. Hargreaves, and Mr. J. Hick. Mainly through the exertions of those who would have benefited had the site not been given, a suitable plot of five acres was found just in time to prevent the legacy to the hospital from becoming void. Mr. Knowles most generously gave the site, a plot pleasantly situated to the north of Bolton, and about half-way between Mr. Greg's house and the Bromley Cross Station. The land slopes towards the south and west, and the country around about is attractive. Since the year 1870 the money has been well invested, and has greatly increased in amount, so that a larger and more complete hospital, duly endowed, can be erected. The trustees have engaged the services of Messrs. Medland and Henry Taylor as architects. The building as now designed is divided into three departments for men, women, and children, with a central administrative block. The preliminary works of levelling, foundations and boundary walling have been already let to Messrs. Thornton & Sons, of Liverpool, and are to be pushed on with all desirable speed.

### SCHOOL BUILDINGS.

**Beswick.**—The memorial-stone of a new school for the Manchester School Board for the district of Beswick has been laid. The building will be two storeys high, and will contain accommodation for 1,100 scholars. The basement will be used as a playground. Four large schoolrooms will be provided, and twelve commodious class-rooms, and premises will also be made for a caretaker. The building is to be in brick with stone dressings. The school is being erected by Mr. J. L. Ward from plans by Messrs. Potts, Pickup & Dixon. The total cost, including the site and furnishing, is estimated to be about 11,000*l.*

**Sheffield.**—The foundation-stone of the Montgomery Hall and Sunday School Institute has been laid. The site of the proposed building is in New Surrey Street, and its situation is, all that could be desired, being easily accessible from all parts of

the town, and within comparatively easy reach of both railway stations. The building will be in the Domestic Gothic style, of worked ashlar stone throughout. The large hall will provide accommodation for 1,000 persons, and will have five wide staircases as outlets, the doors all being made to open outwards. The contract for the building has been let to Messrs. George Longden & Son, of Neepsend, at 7,696*l.*; Mr. C. J. Innocent is the architect, and Mr. Dickinson is clerk of works.

**Sheffield.**—The School Board have adopted plans by Mr. C. J. Innocent, of Sheffield, for the proposed schools at Sharrow Lane. The plans provide for the accommodation of 400 boys and 400 girls in one block, and for 300 infants in a separate building; but it is only intended at present to carry out the building of the boys and girls' departments, and the plans are so arranged that the main building can be temporarily adapted for boys, girls, and infants. The buildings are to be of stone.

**Ellesmere.**—The new college of St. Oswald has been dedicated. The college stands a little to the right of the Ellesmere and Lee road, and is hidden from the view of wayfarers by a low range of hills, which may be expected to do good service in the time to come by warding off the keen east winds. On a very clear day a view of Snowdon may be obtained. The design of the buildings is a mixture of the Perpendicular and the Elizabethan styles of architecture. The impression which strikes the visitor is that neatness and durability have been aimed at by the constructors rather than useless and costly ornamentation. The principal entrance at present is on the eastern side, but eventually the main approach will be formed on the western side. To commence with provision is only made for 200 boys. It is intended to limit the number to 100 next term, but as time goes on the original design will be carried out, and there will be provision made for 500 students. On entering by what has been termed the Founder's Gate, the visitor finds himself in a corridor 220 feet long and 8 feet in width, the masters' rooms opening on the west side. The first and second floor rooms are devoted to boys' dormitories. Passing through a spacious, lofty, and well-lighted ante-hall we come by a small flight of steps to a room which for the present will have to do duty as dining and school-room. This is undoubtedly the handsomest room in the whole building. It is 120 feet in length, 36 feet wide and 22 feet in height, measuring from the wall plate, but to the apex of the roof the height is 35 feet. The dormer windows are filled with stained glass, by which a subdued and pleasant effect is produced. Underneath the dining-hall is the gymnasium, but for a few years at least it will serve as chapel. Ruabon red bricks with Cefn stone dressings are the materials of which the building is composed, the timber throughout being the best Russian deal. The architects are Messrs. Carpenter & Ingelow, of 4 Carlton Chambers, Regent Street, London, and the works have been carried out under the direction of the committee by Mr. Garland. So far upwards of 27,000*l.* has been spent, exclusive of the cost of furnishing.

### GENERAL.

**The Dome of St. Peter's, Rome,** has been recovered with lead. The work has occupied twelve years, and has cost over 200,000 lire (8,000*l.*). The original covering was applied to the dome in an imperfect fashion, which made continuous repairs a necessity; and at last it was determined to strip off the whole envelope and substitute a new one on a better system. New lead was imported from Spain and mixed with the old lead, in the proportion of one part old to two parts new. The total weight of the new cover is given at 354,305 kilograms; and if it were spread out flat it would occupy an area of 6,152 square metres, or about an acre and a half. In stripping off the old plates, three of them were found to be of gilded copper.

**The Removal of the Wellington Statue** from Hyde Park Corner began at one o'clock on Thursday morning. It was found that the horse was too heavy to be carried over the bridges on the road to Aldershot, and the body has been cut in half.

**The Meeting of the Royal Archæological Institute** began at Newcastle-on-Tyne on Tuesday, when an address was delivered by the Duke of Northumberland in praise of the district as a field for study.

**The Ancient Church of St. Oswald, Filey,** is to be restored. Promises of subscriptions have been received to the amount of over 2,000*l.*, the estimated cost of the whole work being about 4,000*l.*

**Chiswick Parish Church** was consecrated on Saturday last. The tower of the old church has been retained, but the remainder is new. Mr. Pearson, R.A. was the architect, and the cost has been defrayed by one of the local brewers.

**A Contract** amounting to 4,700*l.* has been taken for the rebuilding of St. John Baptist's Church, at Pilling, near Fleetwood, which is to be carried out under the direction of Messrs. Paley & Austin, architects, Lancaster.

**The Glasgow Masons** have been on strike for a great part of the week. The point in dispute is an advance of a penny an hour which is claimed by the men—the present wage being sevenpence. Twenty-nine firms have agreed to the demand.



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, AUGUST 9, 1884.

### COMPETITIONS OPEN.

**NORTH SHIELDS.**—Aug. 18.—Plans are required for Alterations and Additions to the Workhouse. Mr. Christopher Scott, Guardians' Hall, North Shields.

**STOCKPORT.**—Sept. 15.—Designs are invited for Public Baths. Premiums of £50, £30, and £20. Mr. Walter Hyde, Town Clerk, Stockport.

### CONTRACTS OPEN.

**ABERDEEN.**—Aug. 11.—For Additions to Midmar Parish Church. Messrs. Matthews & Mackenzie, Architects, 255 Union Street, Aberdeen.

**ALNE.**—Aug. 9.—For Building Dwelling House. Mr. H. M. Cross, 17 Blake Street, York.

**BARDSLEY.**—For Building Organ Chamber and Chancel Extension to Church. Messrs. John Eaton & Sons, Architects, Ashton-under-Lyne.

**BELFAST.**—Aug. 13.—For Erection of School Buildings, McClure Street. Messrs. Young & Mackenzie, Architects, Donegall Square East, Belfast.

**BELFAST.**—Aug. 14.—For Building School in Connection with Westbourne Presbyterian Church. Messrs. Young & Mackenzie, Architects, Donegall Square East, Belfast.

**BIRMINGHAM.**—Aug. 23.—For Erection of Kitchen and other Buildings at the Workhouse. Mr. W. H. Ward, Architect, Paradise Street, Birmingham.

**BROMLEY.**—Aug. 13.—For Construction of Cant Clough Reservoir and Works in connection. Mr. E. Filliter, 16 East Parade, Leeds.

**CASTLEFORD.**—Aug. 9.—For Building Mission Church. Messrs. Perkin & Bulmer, Architects, Calverley Chambers, Victoria Square, Leeds.

**CHEPSTOW.**—Aug. 20.—For Building Petty Sessional Court. The County Surveyor, 2 Bridge Street, Newport, Mon.

**DARTMOUTH.**—Aug. 9.—For Reseating Townstal Church. Mr. Ashford, Churchwarden, Coombe, Dartmouth.

**GARSTON.**—For Building Mercantile Marine Offices. Mr. S. B. Worthington, Engineer, Victoria Station, Manchester.

**HALIFAX.**—Aug. 10.—For Rebuilding Excelsior Works. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**HAMMERSMITH.**—Aug. 12.—For Booking Office and Extension of Platforms, Latimer Road Station. The Engineer, Paddington Station.

**HUDDERSFIELD.**—Aug. 12.—For Building Chimney to Woodhouse Mills (Bricklayers' Work). Messrs. John Kirk & Sons, Architects, Huddersfield.

**LONGTON.**—Aug. 20.—For Building Relief, Vaccination, and other Offices. Mr. E. Scrivener, Architect, Howard Place, Hanley.

**LUTION.**—Aug. 19.—For Additions to Foundation School. Mr. F. R. Kempson, Architect, Hereford.

**MULLINGAR.**—Aug. 20.—For Building Post-Office. Office of Works, Dublin.

**NETHERTON.**—Aug. 16.—For Foundations of All Saints' Church. Mr. C. J. Ferguson, Architect, 50 English Street, Carlisle, and 15 Dean's Yard, Westminster.

**NETLEY.**—Aug. 13.—For Building Board School. Mr. William Jurd, Architect, 10 Oxford Street, Southampton.

**NORWICH.**—Aug. 13.—For Building Mixed Board School. Mr. J. H. Brown, Architect, Lower Close, Norwich.

**OLDHAM.**—For Additions to Newbreak Mill. Mr. S. Stott, Architect, 3 Clegg Street, Oldham.

**PETERBOROUGH.**—Aug. 19.—For Building Dwelling-house, Westgate. Mr. James Ruddle, North Street, Peterborough.

**PONTYCYMMER.**—Aug. 13.—For Building Methodist Chapel. Mr. Edward Lewis, Pontycymmer.

**PORTH.**—Aug. 12.—For Building Engine and Purifying Houses, Chimney Stack, &c., at the Gasworks. Mr. E. S. Pike, General Manager, Gas Office, Pentre, Rhondda.

**PRESTON.**—Aug. 20.—For Construction of Dock, Tidal Basin, Locks, Diversion of River, &c. Mr. E. Garlick C.E., 33 Winkley Square, Preston.

**SWADLINCOTE.**—Aug. 9.—For Extension of Market Hall Premises. Mr. James Nixon, Architect, Church Gresley.

**SWALWELL.**—Aug. 11.—For Building Paper Mill. Mr. J. Henderson, jun., Architect, 16 John Street, Sunderland.

**THURSBY.**—For Additions to Board School. Mr. James Leslie, Architect, 27A English Street, Carlisle.

**TYLORSTOWN.**—Aug. 11.—For Building Methodist Chapel. Rev. W. Jones, Ton Ystrad.

**VAUXHALL.**—Aug. 20.—For Building a 40-quarter Brewery. Messrs. H. Stopes & Co., Architects, 24A Southwark Street, S.E.

**WALSALL.**—Aug. 23.—For Erection of Farm Buildings, Brockhurst Farm, for the Corporation. Mr. Samuel Wilkinson, Architect, Town Clerk, Bridge Street, Walsall.

**WAKEFIELD.**—Aug. 15.—For Building Villa Residence, Boundary Walling, &c. Mr. Fred. Simpson, Architect, Southgate Chambers, Wakefield.

**WARLEY.**—For Building Barn at Gate Stoops. Mr. S. Wilkinson, Architect, Sowerby Bridge.

**WIMBLEDON.**—Aug. 23.—For Building Press House, Cake Shed, and Plant for Treatment of Sewage Sludge. Mr. W. H. Whitfield, Local Board Offices, Broadway, Wimbledon.

**WORCESTER.**—For Building Passenger Station, Langley Green Junction. Mr. J. S. MacIntyre, C.E., 9 Dan's Yard, Westminster.

**WYKE.**—Aug. 12.—For Erection of Coastguard Buildings. Director of Works Department, Admiralty, Whitehall.

**YORK.**—Aug. 18.—For Restoration of St. Crux Church. Messrs. Fisher & Hepper, Architects, 16 Castlegate, York.

### TENDERS.

#### ABERDEEN.

For Excavation, Concrete, Mason, and Iron Works of Viaduct, from Skene Street to Baker Street, for the Town Council. Mr. W. Boulton, Surveyor, Town House, Aberdeen.

BISSET & SON (accepted) . . . . . £2,990 0 0

#### ASHTON-UNDER-LYNE.

For Building Surgery and Additions to the Residence of Dr. Hamilton. Mr. J. H. Burton, Architect, Ashton-under-Lyne.

Burton & Sons, Ashton-under-Lyne . . . £880 0 0

Gibson, Dukinfield . . . . . 825 0 0

HOLMES & WEBSTER, Ashton-under-Lyne (accepted) . . . . . 775 6 0

#### BARNET.

For Alterations and Additions to The Limes, Warwick Road, New Barnet, for Mr. G. Page. Mr. J. W. Brooker, Architect, 13 Railway Approach, London Bridge, S.E.

James . . . . . £325 0 0

Butcher . . . . . 302 0 0

KICK (accepted) . . . . . 256 0 0

#### BELFAST.

For Erection of Shops in Smithfield Market, for the Belfast Town Council. Mr. J. J. Montgomery, Borough Surveyor. Quantities by Messrs. S. & W. H. Stephens, Donegall Place, Belfast.

Hogg (accepted).

#### BERWICK-UPON-TWEED.

For Laying Down Cement Concrete Footpaths with Whinstone Kerbing and Channels, Tweedmouth. Mr. D. M. McGregor, Surveyor, 40 Castlegate, Berwick. Brough (schedule of prices)

MANUFACTURERS AND IMPORTERS OF MARBLE AND WOOD

## CHIMNEY PIECES.

QUEEN ANNE

ELIZABETHAN

AND

RENAISSANCE

GRATES

STOVE GRATES

KITCHEN RANGES

FENDERS

AND

RAILING

MANTELS

OVER MANTELS

ART TILES

AND

HEARTHES

STOVE GRATE MANUFACTURERS AND IRONFOUNDERS,

# GEORGE WRIGHT & Co.

SHOW-ROOMS:

155 QUEEN VICTORIA STREET

And 238 Upper Thames Street, Blackfriars, E.C.—WORKS, ROTHERHAM.



## BLACKBURN.

For Erection of new Class-room, St. Emanuel's Schools, Cherry Tree, near Blackburn, for the Rev. A. Gallaher, M.A., Vicar. Mr. JAMES BERTWISTLE, S.A., Architect, 1 Tacketts Street, Blackburn. Quantities by Architect.

## Accepted Tenders.

Duerden, masonry	£100	5	0
Ibbotson, joiner	74	0	0
Charney, brickwork	57	11	2
Dyson & Son, slating	23	0	0
Whittaker & Sons, plumbing, glazing, and painting	14	16	2
Cook, plastering	7	12	5

For Erection of Two new Shops, King Street, Blackburn, for Mrs. Haslam. Mr. JAMES BERTWISTLE, S.A., Architect, 1 Tacketts Street, Blackburn. Quantities by Architect.

## Accepted Tenders.

Higson & Sons, joiner	£282	9	0
W. & I. Gillbrand, brickwork	156	18	0
R. Duerden, masonry	90	5	0
Dyson & Son, flagging and slating	64	0	0
Law, plumbing and glazing	54	18	0
Airey, plastering	33	18	0
R. J. Duerden, painting	18	0	0

## BRADFORD.

For Erection of Shop Premises, Darley Street and Upper Piccadilly, Bradford, for Mr. C. Heppleston. Mr. GEORGE MILNES, Architect, Bradford. Quantities by the Architect.

## Accepted Tenders.

Cordingley, Idle, mason	£740	0	0
Thompson & Son, Bradford, joiner	270	0	0
Haigh & Slater, Bradford, plumber	102	0	0
Black, Manningham, plasterer	68	0	0
Hill & Nelson, Bradford, slater	37	0	0
Rawson, Bradford, painter	30	0	0

Total £1,247 0 0

## CATFORD.

For Restoration of Highfield House, Catford Bridge, Kent (partially destroyed by fire), for Mr. Alderman Whitehead. Mr. JOSIAH HOULE, F.R.I.B.A., Architect, 71 Guildford Street, W.C.

Jerrard	£3,164	0	0
Macey & Sons	3,029	0	0
Kearley	2,658	0	0
Spencer & Co.	2,645	0	0

## CHESTERFIELD.

For Four Houses and Shop at Grassmoor, near Chesterfield (exclusive of Bricks, which will be supplied by the Proprietors), for the Executors of the late Mr. C. Oxley. Mr. T. T. RUDGE, Architect, Hucknall, near Mansfield. Quantities supplied by Messrs. Rudge & Sharpe.

Farnsworth & Son, Cromford	£610	0	0
Madin, Chesterfield	608	13	0
Wheeldon Bros., Belper (too late)	580	0	0
Marsden, Brampton	558	17	0
Brown, Hasland	549	0	0
Heath, Hasland	536	16	4
Jowett, Grassmoor	517	17	0
Dennis, Kirkby Folly	514	0	0
Hays, Clay Cross	511	10	0
Shaw, Sutton-in-Ashfield	505	9	9
Tinkler, Clay Cross	498	0	0
Roe & Son, Alfreton	496	19	6
Wilson & Wain, Pilsley	469	15	0
REVILL & HOLMES, Grassmoor (accepted)	433	2	0

## CLAY CROSS.

For Additions to Lecture Hall, Market Street, Clay Cross. Mr. W. BRAMHAM, Architect. Quantities by the Architect.

Hays	£166	15	6
TINKLER (accepted)	151	0	0

## COVENTRY.

For Rebuilding and Alteration of Premises, Park Street, for the Guardians of the Coventry Union. Mr. T. W. WHITLEY, Architect, Coventry.

Mayo & Son	£640	0	0
Worwood	627	0	0
Brittain	613	0	0
Lester & Wincote	608	12	0
Makepeace	574	0	0
GARLICK (accepted)	540	0	0

## DARWEN.

For Erection of New Chimney, 40 yards high, at Grimshaw Bridge Paper Mill, near Darwen, for Messrs. S. A. Nicholls & Co. Mr. JAMES BERTWISTLE, S.A., Architect, 1 Tacketts Street, Blackburn. Quantities by Architect.

W. & J. GILLBRAND (accepted)	£213	0	0
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## EASTBOURNE.

For Works to the Mews, Compton Street, Eastbourne. Messrs. WILLIAM REDDALL & SON, Architects and Surveyors, 10 South Street, Finsbury, E.C., and 86 Terminus Road.

Bainbridge	£512	10	0
Newman & Hart	387	17	0
White	350	0	0

## HINDLEY.

For Building Eight Dwelling-houses, Hindley, for Mr. Isaiah Pigott. Messrs. HENRY WALLS & SON, Architects. Quantities by the Architects.

Dickinson, Westington	£1,200	0	0
W. & T. Walls, Hindley	1,200	0	0
Holmes, Wigan	1,195	0	0
Powell, Aspull	1,164	0	0
Green, Aspull	1,108	0	0
Potter, Hindley	885	0	0

## KNOWBURY.

For Alterations and Additions to St. Paul's Church, Knowbury, Salop. Mr. EDWARD TURNER, Architect, Bowling Green Street, Leicester. Quantities supplied.

Thrall & Payne, Leicester	£1,756	0	0
Grosvenor, Ludlow	1,690	0	0

## LEITH.

For Enlargement of Victoria Schools, Newhaven, Leith. Mr. G. CRAIG, Architect, 85 Constitution Street, Leith. Quantities by Mr. Charles A. Hendery, Inverness.

## Mason and Brickwork.

Simpson, Leith	£1,879	0	0
A. & W. Fingzies, Leith	1,683	0	0
Melrose, Leith	1,575	0	0
Watson & Son, Edinburgh	1,550	0	0
Baxter, Leith	1,500	0	0
Thynn, Leith	1,330	0	0
SHANKS, Leith (accepted)	1,276	0	0

## Carpenter, Joiner, Glazier, and Ironmonger Work.

Wishart, Kirkcaldy	840	0	0
Hart & Son, Leith	820	0	0
Watson, Edinburgh	817	0	0
Cunningham & Sons, Leith	800	0	0
J. & G. Laidlaw, Leith	789	0	0
Watson & Son, Edinburgh	750	0	0
Johnston & Rose, Leith	729	0	0
Henderson & Wilson, Leith	725	0	0
Dickson, Leith	725	0	0
A. & W. Fingzies, Leith	700	0	0
SAUNDERS, Leith (accepted)	694	0	0
M'Niven & Co., Edinburgh	673	17	0

## Slater Work.

Anderson & Son, Edinburgh	81	4	10
Ogilvy, Leith (accepted)	74	0	0

## Plumber Work, Gasfitting, &amp;c.

Liddle, Leith	195	0	0
M'Pherson, Leith	180	0	0
Laing, Edinburgh	170	0	0
Lander, Leith	166	10	0
PORTBOUS, Leith (accepted)	162	0	0

## Plasterwork.

A. & W. F. Fingzies, Leith	258	0	0
Baird & Son, Leith	245	0	0
Sutherland, Leith	240	0	0
SCOTT & DAVEY, Leith (accepted)	230	0	0

## Concrete Work.

Stuart & Co., Edinburgh	38	19	7
Sutherland, Leith	34	0	0
Baird & Son, Leith	30	0	0
SCOTT & DAVEY, Leith (accepted)	29	0	0

## Heating Apparatus.

Keith, Edinburgh	109	0	0
Renton Gibbs, Liverpool	105	0	0
KING, Liverpool (accepted)	99	15	0

Tenders for painting and furnishing desks, &c., are not yet estimated.

## LONDON.

For Completion of Premises, Bective Buildings, Ducksfoot Lane, E.C., for Mr. E. H. Thompson. Mr. J. W. BROOKER, Architect, 13 Railway Approach, London Bridge, S.E.

BEALE (accepted)	£980	0	0
For Rebuilding Premises, Finsbury, E.C., for the Finsbury Estates Company, Limited. Mr. J. W. BROOKER, Architect, 13 Railway Approach, London Bridge, S.E.			
Hall, Bedford & Co.	£15,939	0	0
Brass	15,750	0	0
Perry & Co.	15,650	0	0
Morter	15,223	0	0
Lawrance	15,141	0	0
Scrivener & Co.	14,973	0	0
Downs (accepted)	14,967	0	0

For Executing the Internal Fittings to the Green Man and Still Public House, Upper Whitecross Street, E.C., for Mr. E. Cain. Mr. J. W. BROOKER, Architect, 13 Railway Approach, London Bridge, S.E.

Hewlett	£439	0	0
Thomas	269	0	0
W. & F. Croaker	267	0	0
BEALE (accepted)	260	0	0

For Alterations, &c., to the Pitt's Head Tavern and Houses adjoining in Henry Street and Charles Street, St. John's Wood, for Mr. W. T. Fryer. Mr. ALFRED HOPKINS, Architect, 10 Berners Street, W. Quantities not supplied.

Anley	£1,970	0	0
Adams	1,967	0	0
Mills	1,803	0	0
Hopkins	1,314	0	0

For Internal Painting and Decoration at Freemasons' Hall, Great Queen Street, from the designs and under the direction of the Grand Superintendent of Works. Quantities by Messrs. William Reddall & Son.

Read	£1,121	13	7
Homan & Son	1,047	0	0
Campbell, Smith & Co.	890	0	0
McIntosh	684	3	6

For Alterations and Additions to No. 43 Green Street, Park Lane, W., for Dr. D. W. C. Hood, M.D. Mr. GEORGE A. DUNNAGE, A.R.I.B.A., Architect. Quantities supplied by Mr. C. L. Cadney, 57 Moorgate Street, E.C.

Binder & Co.	£1,099	10	6
W. & C. Curtiss	968	18	0
J. & P. HERMON	926	0	0

\* Accepted subject to certain reductions.

For Forming a new Road between Cold Harbour and Bridge Road, Poplar, to be called "Managers Street," for the Metropolitan Asylums Board. Messrs. A. & C. HANSTON, Architects, 15 Leadenhall Street, E.C. Quantities not supplied.

Adams	£485	0	0
Victoria Stone Company	470	0	0
Rutty	440	0	0
Mowlem & Co.	434	0	0
Nowell & Robson	425	0	0
BEADLE BROS. (accepted)	356	0	0

## LONDON—continued.

For Repairs, &c., at the Fentiman Arms, Fentiman Road, Clapham, for Mr. Pike. Mr. H. I. NEWTON, Architect, 17 Queen Anne's Gate, S.W.

Brightling	£275	0	0
Burman & Sons	60	0	0
Crabtree	59	10	0
Cook	55	0	0
READ (accepted)	47	10	0

For Extension of Premises at 128 Goswell Road, E.C., for Messrs. Carter, Paterson & Co., under the superintendence of Mr. William Eve, 10 Union Court, Old Broad Street, E.C.

Lawrance	£4,590	0	0
Downs	4,533	0	0
Bangs	4,494	0	0
Morter	4,465	0	0
Harris & Wardrop	4,440	0	0
Higgs	4,290	0	0
BROWN (accepted)	4,190	0	0

For Additions to Offices of Hornsey Local Board, at Southwood Lane, Highgate, N. Mr. T. DE COURCY MADE, Surveyor.

Kerry & Son	£6,770	0	0
Gibbs & Imber	6,200	0	0
Houghton	5,628	0	0
Kearley	5,543	0	0
Greenwood	5,480	0	0
Nightingale	5,397	0	0
M'Cormack & Son	5,382	0	0
Mall	5,250	0	0
Tongue	5,243	0	0
LAWRANCE & SON (accepted)	5,243	0	0

For Rebuilding the Ship and Turtle Tavern, Leadenhall Street, E.C., for Messrs. C. & A. Painter. Mr. GEO. SPARKS, 8 Great St. Helens, E.C., Architect. Quantities by Mr. Henry J. Treadwell, 5 Agar Street, Strand, W.C.

Little	£21,260	0	0
Sargeant	21,200	0	0
Boyer	20,850	0	0
Ashby Bros.	20,366	0	0
Scrivener & Co.	20,365	0	0
Colls & Sons	20,270	0	0
Conder	20,159	0	0
Perry & Co.	19,886	0	0
Ashby & Horner	19,885	0	0
Rider & Son	19,868	0	0
Brass	19,873	0	0
Morter	19,138	0	0
Chappell	18,162	0	0

## NEWBURY.

For Erection of New School Buildings, with Master's House, in Enborne Road, Newbury, for the Governors of St. Bartholomew's School. Mr. J. P. POWELL, Architect, 57 Basinghall Street, London, E.C. Quantities by Messrs. Batstone Bros.

Nightingale, London	£8,176	A.*	
Green, London	7,795	£50	
James, Newbury	7,337	—	
Harris & Wardrop, London	7,274	50	
Silver, Sons & Filwood, Maidenhead	7,215	52	
Elliot, Newbury	7,170	63	
Crook, Southampton	7,147	17	
Stephens & Bastow, London	6,999	—	
Simmonds, Reading	6,983	45	
Sandus, Southampton	6,883	50	
Claridge, Banbury	6,766	30	
BULL, SONS & CO. (Limited), Southampton (accepted conditionally)	6,581	—	

\* Allow, if stone be quarry worked.

## NEWMARKET.

For Building House for Mr. Manser, at Newmarket. Mr. JOHN FLATMAN, Architect, Newmarket.

Edwards, Newmarket	£1,645	0	0
Simpson & Son, Newmarket	1,480	0	0
Hook & Tebbit, Soham	1,393	0	0
Saint & Son, St. Ives (Hunts.)	1,360	0	0
Kerridge & Shaw, Cambridge	1,247	0	0
Denson, Cambridge	1,200	0	0

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For Supply of new Cast-iron Condensers and Wrought-iron Scrubbers, with Valves and Connections, North Ormesby Gas Company. Mr. W. S. TAYLOR, Engineer.

Brown Bros., Stockton (too late)	£300	0	0
Holmes & Co., Huddersfield	270	0	0
Newton, Chambers & Co. (Limited), Sheffield	215	0	0
ASHMORE & WHITE, Stockton-on-Tees (amended and accepted)	226	0	0

## SALISBURY.

For the Construction of 2,000 feet of Main Sewer, Precipitating Tanks, Buildings, &c., for Disposal of Sewage, for the Salisbury Sanitary Authority. Mr. J. C. BOTHAMS, City Engineer.

MACKAY, Hereford (accepted)	£4,284	8	0
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## SPEYMOUTH.

For Additions, Repairs, and Alterations, Speymouth Church. Mr. THOMSON, Architect, Haughes, Keith.

Gordon, Fochabers, mason	£132	0	0
Glass & Son, Fochabers, carpenter	220	0	0
Henderson, Fochabers, slater	64	16	0

Total £416 16 0

## SWANNINGTON.

For Building Infectious Hospital at Swannington, for the Guardians of Ashby-de-la-Zouche. Mr. S. HEWARD, Architect, Ravenstone. Quantities by the Architect.

Architect, Ravenstone. Quantities by the Architect.			
Bland, Leicester	£449	0	0
Moss, Coalville	369	10	0
Neale, Donnington	297	15	0
Buckworth & Son, Whitwick	289	9	0
Stretton, Coalville	260	0	0
SMITH, Measham (accepted)	240	0	0



**TREWEN.**

For Building a Bridge over the River Inney at Trewen, for the Launceston Highway Board.  
BURR, Newport by Launceston (accepted) .£100 0 0

**TODMORDEN.**

For Additions to National Schools, Todmorden. Mr. JESSE HORSFALL, Architect. Quantities by the Architect.

*Accepted Tenders.*

Atkinson & Son, mason, &c.  
Sutcliffe, joiner.  
Barnes & Sons, slater.  
Whitaker, plumber.  
Black, plasterer.

**WATERLOO.**

For Building Three-Stalled Stable and House for Steam Road Roller, for the Waterloo and Seaforth Local Board. Mr. R. THOMPSON, Surveyor.

Taylor, Blundellsands	£360 0 0
Ward & Rigby, Bootle	329 10 0
Sawyer, Waterloo	299 0 0
Roberts, Waterloo	297 0 0
Johnson, Litherland	290 0 0
MASKER, Bootle (accepted)	267 17 0

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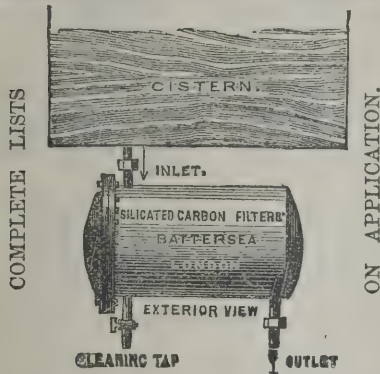
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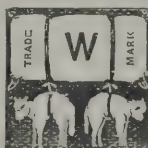
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For Cottage Residence at Teddington, for Mr. G. H. Harrison. Mr. GEORGE A. DUNNAGE, A.R.I.B.A., Architect, 5 John Street, Adelphi.  
J. & P. HERMON (accepted) .£1,727 0 0

**TOTTENHAM.**

For Kerbing and Asphalting Footway of part of Philip Lane, Tottenham. Mr. DE PAPE, Surveyor.  
Bloomfield .£194 12 6  
BRADSHAW & Co. (accepted) .193 0 4  
Stiebel .172 0 6

**WEST VALE.**

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Wadsworth & Sons, Greetland, slaters  
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"JAMES WEIR, F.R.I.B.A.

"To Mr. Grundy."

"Baptist Chapel, Clapham Common, London. Richard  
Webb, Pastor, 10 Grafton Square.

"February 15, 1884.

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Powell .£40 0 0  
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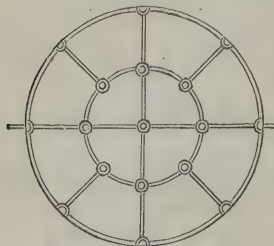
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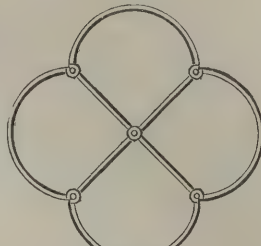
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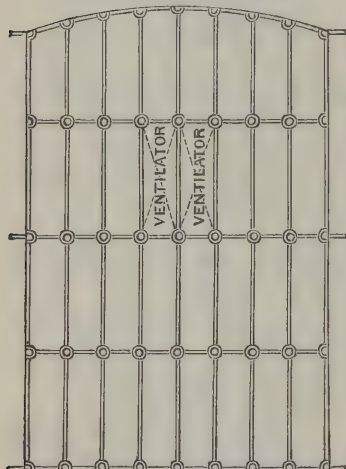
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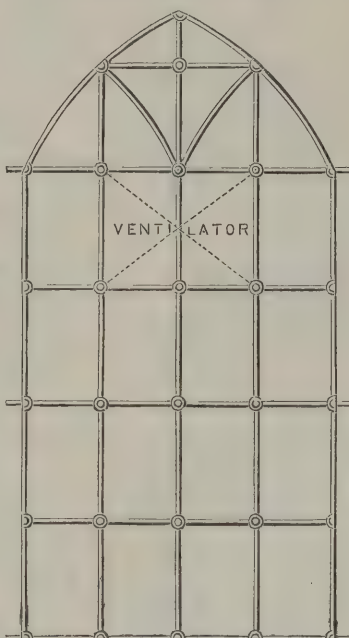
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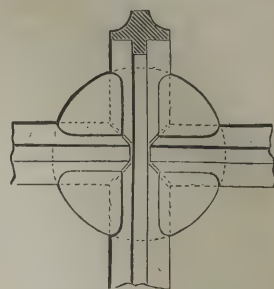
CLOSE BAR SASH (obviating use of Window Guards.)



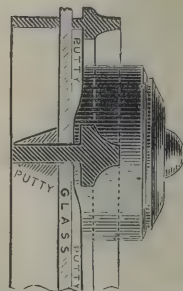
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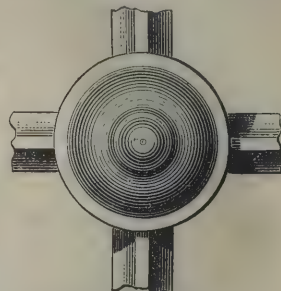


Back view of Boss, full size.

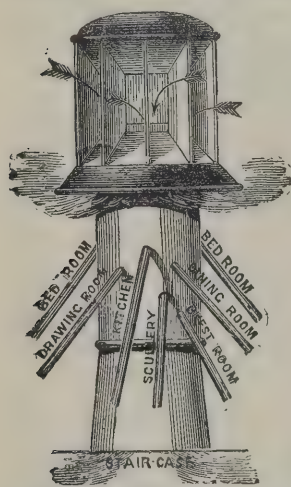


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# The Architect.

## ACADEMICAL PLAN.



HERE are necessarily few, even amongst the small number of those that are professionally well acquainted with the language of architectural drawing, who can be trusted to pronounce an off-hand opinion upon the plan of a large and intricate building. As regards what are called elevations in whatever form—barring, of course, the artifices of draughtsmanship—everybody may be expected to read their effect pretty freely who has learnt to read them at all, and those who understand them well can read them with the utmost rapidity and with perfect certitude. Sectional drawings, also, are little, if any, less quickly understood. But plans—except in the single instance, perhaps, of a church of highly monumental character—are always more or less difficult to grasp at a glance, even as regards their *generalia*, to say nothing of their multifarious particulars in the various degrees of detail. It is plain, indeed, that the language of plan-drawing, although technically the same geometrical projection as the rest, is in its effect a language by itself, every line of which, to be thoroughly understood, requires alike the master's hand in the designer and the master's eye in the critic.

Thus it is, in the case of any competition of intricate architectural designs, that the plans are scarcely ever understood except by two classes of persons, namely, the rival competitors and the professional judges. And thus it is further that in so many instances the complaints of competitors who have been unsuccessful are found to turn upon the theory that, even by the professional judges, the merits of plan have not been sufficiently considered. In fact, it is scarcely too much to say that, beyond a certain point of complexity, no one but a competitor who has himself gone laboriously through the entire process of contriving a set of plans for the subject in hand will be capable of reading the collection of designs of plan with sufficient ease to compare together their real merits—real merits, indeed, as distinguished from those that are fictitious and indeed deceptive. In the case of a church, to which allusion has already been made, an experienced ecclesiastical architect can spot in a moment a plan of singular merit, for the simple reason that the subject is so entirely academical. His mind is stored with examples, rules, principles, and reasons, and his admiration answers at once to the call of memory and understanding. The science of plan-design in this field has arrived at that ultimate simplicity which is the end of all scientific development, and the expert intelligence is therefore thus clear and decisive. So also with the case of a high-class residence. Putting aside certain little pleasantries of the moment in Queen Anne plan, which amuse the æsthetes of the day, but cannot be recognised in any way as of permanent value, the arrangements of a good English house, whether in town or country, are thoroughly understood and accepted, subject to the law of development but no more. To an experienced eye, therefore, the comparison of a number of plans of this class, or the discernment of the merits of any single design, is quite easy, and the quick discovery of demerits more easy still. But here the subject is not academical in the same sense as the arrangement of the church; inasmuch as there is a certain identification of the academical character in domestic plan with the element of Italian regularity, as distinguished from that Gothic irregularity which modern English people may be said almost always to prefer in their houses. The French houses are in this sense academically planned, and the consequence is, as the English say, that they are exquisitely devoid of comfort. Let that pass, however, as a mere illustration; and perhaps a better illustration still is to be obtained by looking into the “*Vitruvius Britannicus*,” and comparing the best English domestic plans of the eighteenth and early nineteenth centuries with the general character of the really good examples of our own day which occasionally appear in the professional journals. The unanimous verdict must be that the newer houses are disposed throughout with reference to principles of mere occupation,

whereas in the older ones occupation has to accommodate itself as it best can to principles of an academical sort. But it cannot be denied all the while that those older plans are vastly more attractive to the eye as plans. They are symmetrical, regular, stately, classically artistic, compact, perhaps commodious, refined, and elegant. But as a fact, nevertheless, as their occupants know too well, they are inconvenient and uncomfortable, their compactness a snare, their commodiousness a delusion. Here academical plan is a failure.

These observations may now enable the reader who happens to be not an expert in plan to entertain a shrewd suspicion that in other subjects of design generally—monumental works always excepted—an academical plan may be an attractive deception. A public library or museum, or a suite of picture galleries, we may take leave to call quasi-monumental, if only on account of the contents; so also a prison or a workhouse, and even a public school or a college, must display a primary symmetry of its own in the arrangement of its plan. But when we come to such a subject as a great group of public offices of business, the critic ought not to be deceived by academical symmetries, but indeed ought rather to become alarmed when such spurious attractiveness of plan is apparent at first sight. If the integral divisions of accommodation were, as mathematicians say, equal and similar, then, of course, their disposition would exhibit corresponding equality and similarity. But this is never the case, and the equality and similarity which so charmingly run over a highly-skilful academical plan really indicate that the accommodation is compromised to meet the symmetry—a condition of things which in fact is more or less palpably manifested in the great majority of public buildings of the class in question, all over the world.

What actually happens in the case of a competition of plans of this order may be described thus. Each competitor feels that he must *academicalise* his plan as much as he possibly can, if only for the sake of attracting the notice of academical criticism. He is familiar with the observation which comes to be made invariably by professional observers, to the effect that a certain design is distinguished by “the excellence of its plan,” or another by the inferiority of its plan. He knows that this means pretty much the same thing as the approval of one for its “carefully-designed elevation,” or the disapproval of another for its want of such careful design. These are days in which people read as they run; and in competitions the design which fails to be read running has only its author to blame for being not read at all. Spurious academicalism of plan, therefore, becomes one of the artifices of the competition system, and the fact cannot be helped.

What happens, on the other hand, when an expert designer of internal arrangement has the task entrusted to him of devising a large and intricate plan without competition, is quite a different thing. He may very likely begin, and go on, with the hope that his plan will “look well” when completed; for indeed he knows, as others know, that this will secure for it that superficial approbation which is always a consideration with the best of us. It may be admitted, also, that in order to promote this end he will lay out his general scheme from the first with an eye to shipshape disposition as a rule of his work, guiding himself perhaps by precedents, and acknowledging the virtue of system in every way. He will even be prepared in the abstract for the necessity of compromising matters here and there for the sake of system. But, granting all this, he will proceed to the development of his arrangements in detail with a freedom from restraint which is invaluable. Clearly understanding as he does that the eventual criticism of his arrangements will be between himself and his clients privately, and that, in the unrestricted explanations which will take place, it will be a hard task to persuade careful practical men that the conveniences of occupation should be sacrificed to the prettiness of a plan, he will not scruple to make the arrangement take whatever form necessity demands, irregularities of cause producing irregularities of effect very much as they may. A plan so devised will not be an academical plan on paper, but it will be a thoroughly well-organised plan in execution.

It ought always to be borne in mind in designing such a plan that each room is an empire in itself, with its fixed dimensions of necessity, its fit arrangement of door, window, fire, desk, table, and whatever else; in short, its one proper disposition of everything just as if it stood alone. Thus, when an apartment is catalogued in competition particulars to be, say, 250 superficial feet in area, it is not to be supposed to be



an indifferent matter to the occupant whether it is made 25 feet by 10, with a window at one end and the fireplace and door at the other, or 17 feet by 15, with left light, fire in front, door in the right corner, and ample space all around for the transaction of business in a businesslike way. Again, when there are a dozen or more corridors in a building, floor over floor, all the same hundred feet long, and all exactly alike, what is the value of this except on paper, unless the business to be transacted be something like that of a penitentiary?

The true test of merit in a plan of intricacy is undeniably this—that every individual apartment shall, when completed, be as far as possible perfect in itself as viewed from within itself, and its relations to all other apartments also perfect, as if it were the centre of the whole. This is better than all the academicalism in the world; it is the true organisation of a building as compared with the fallacious prettiness of a paper drawing.

### ART AS FORCE.

THOUGH the present age shows unprecedented ability for talking about art, it seems scarcely to have made up its mind as to what art really is. A number of contradictory theories about it may be met with every day. There is, for instance, the utilitarian theory, according to which art simply means physical usefulness. A treatise was published some years ago in which this theory was applied with much labour and ingenuity to architecture. The writer took as his chief example Salisbury Cathedral, and tried to prove that the beauty of every part, down to the smallest moulding, simply arose from its fulfilling admirably its constructive function. The buttresses, he argued, were artistic only because they were well designed to resist thrusts, the columns because they were well calculated to support pressure, and the roof and spire because they were well shaped to throw off snow. Such a book might have been written by a lover of art as an apology to a materialistic age for his favourite object. "You want nothing that is not useful," he seems to say; "nothing that will not in some way help to feed or clothe or shelter you. Very well: I am prepared to prove that this is precisely what art will do for you, and that it will do it all in the most perfect way. When you see this, I hope that instead of despising art any longer, you will begin to encourage it." It was just so, according to Mr. BROWNING, that ANDREA DEL SARTO talked to his worthless wife, and begged her to tolerate his pictures because pictures meant money, and money meant fine clothes and feasting.

Much more generally believed in is the educational or quasi-scientific theory. According to this, art simply consists in a true representation of the facts of nature. Where these facts are properly represented we are assured there is real art; where they are not represented, or represented without complete accuracy, there is no art at all. Exact imitation, according to this doctrine, is everything. But if this be true, why spend an infinity of pains in copying things that we can so easily see for ourselves? The landscape painter, in particular, should not waste his time on scenery that is within everybody's reach. If he can paint something rare or almost inaccessible—the eruption of Krakatoa, or the "sea of ancient ice"—and so show us what we could never have seen for ourselves, there will be a reason and a justification for him. Not so, on this theory, if he paints in Cornwall or in Cumberland—much less if he gives us Richmond Hill or Hampstead Heath. Like AGESILAUS, we do not want someone to counterfeit a nightingale: we can hear the nightingale herself. We do not want a costly picture of those places which we can see over and over again with little trouble, unless there is something in the picture which the places themselves cannot give us. It is not enough that it should be true: to be a work of art it must be something more. A skilfully-taken photograph may, in this narrow sense, have more truth in it than any picture—a catalogue or an inventory more truth than any poem; but truth alone does not bring things like these into the category of art.

Somewhat allied to the last—as proceeding from the same desire to show that art is food for something which the duller can appreciate—is the moral theory of art. This judges every work by its tendency, and pronounces that work not merely good or bad morally in consequence of this, but good or bad as art. Every picture and every poem, on this theory, should have its story to tell, and its lesson to wind up with. It should

be, in short, what HOGARTH'S *Idle Apprentice* and CRUIKSHANK'S *Bottle* are in painting; and what every "novel with a purpose" is in literature. How popular this class of work is any exhibition will prove, and it is always most popular with those who are most incapable of distinguishing the admirable from the worthless. The end, with them, sanctifies the means, and they overlook the badness of the picture in the excellence of its object. It is not surprising that the reaction from this theory has produced an exactly opposite one, and that those who protest against confounding art with morality sometimes seem to confound it, themselves, with the opposite of all that is moral.

There is one thing, at least, that may be said of all these theories. None of them really define art, or tell us how to know it when we see it. All they do is to indicate certain uses to which it may be put. Art may be applied, for instance, to severely practical construction, and applied so as to add hardly any new features to those which necessity had already called for. In the case of Salisbury Cathedral, which the first or utilitarian theory puts forward as an example, it may be granted that structural wants had already demanded the vault, the buttresses, and the columns. But it is not in the satisfaction of these structural wants that the art consists. These wants would have been perfectly satisfied if the nave had only been 30 feet high instead of 70 or 80, if the columns had been round instead of curiously clustered, and if the buttresses had been destitute of a moulding or a chamfer. And though art in this case may not have added many unnecessary features, it has utterly transformed the proportions of the necessary ones, thus making the whole church more than twice as lofty as bare physical utility would have dictated. Art may be applied, again, to exact representations of the facts of nature, and may group together into an effective whole a number of studies showing the way in which clouds drift and stems grow and leaves expand. But it is not in the exactness of the copying that the art of the picture lies. If we could fix for ever the reflection of each cloud and stem and leaf in a mirror, we should have far more exact copies, and yet no art at all. The art lies in the choosing of this detail and the excluding of that, and in the proportioning and arranging of them all; so that out of many disconnected parts there may finally issue one organic whole. And this same process may be applied to forms and colours which do not image those of nature, as well as to those which do. There is art in the decoration of the mosques at Cairo, though their designers rigidly abstained from copying anything in heaven or in earth. There is art in the fighting centaurs of the Parthenon, and in the grotesques of many a Mediæval church. We may regret sometimes that the art has not been put to better use and employed on more worthy materials; but there it unquestionably is: and so we learn that the second theory, like the first one, tells us not what art is, but only what, in the theorist's opinion, artists ought to do with it.

It is still more obvious that the essence of art is not to point a moral and adorn a tale, whether that tale be good or bad in its tendency. This, like the rest, is only one of the purposes to which it may be applied. But what is this elusive power which so many theorists have tried to seize and examine, and which has only left its garments with them and fled? After so many failures, he must be a bold man who would attempt a full definition. Art is not physical utility, though the physically useful may be transformed into the artistic. Art is not the mere statement of truth, though statements of truth, by pen or pencil, may be made into a work of art. It is not the essence of art to teach, though teaching is one of the many things it may be set to do. People say at times that the age of painting is really over—because the object of painting was to teach, and teaching is now done by books. The age of signboard painting is doubtless over. When hardly anyone could read, every tradesman put up a sign at his shop door instead of a name, and much of the art of the Middle Ages concerned itself with what were, in reality, only signboards of a higher kind, applied to religious and ecclesiastical uses. But it is not the mere communication of facts that gives its value even to painting, much less to arts like music and architecture, and to the still higher one of poetry. Art is energy, not direction; an impulse, not a guide. By itself it may be a power to calm or a power to arouse; it depends on the use that is made of it what kind of calm or what kind of action it may tend to produce. Whatever else art includes, it is of its essence to communicate force—not



through the medium of assertions or reasons or inferences, but by its own direct action. It needs to make no statements, it calls in no aid of logic: it simply appears, perhaps in a line of poetry, perhaps in a strain of music; and the force that was in the mind of its maker is straightway communicated to other minds, no matter how far away in time or space. It is by its ability to do this that art announces itself, and the power to do it may be regarded as the one essential element which is traceable under all its infinitely varied forms. Art is force, and the higher the art the greater its effect to modify—either in the direction of calm or of action—the minds which come under its influence.

### HOSPITAL CONSTRUCTION.\*

THERE are some facts recorded in Dr. MOUAT's essay on "Organisation of Medical Relief in the Metropolis" which are by themselves sufficient evidence of the necessity of a better system of hospital construction—if one can be devised. The normal death-rate in the London hospitals actually amounts to nearly one in every ten of the patients admitted, being 9 per cent., or 90 per 1,000. In the Prussian hospitals the mortality is a little less, as it is 88·8 per 1,000. It is found that, on an average, there are 100 deaths every year in the London hospitals from pyæmia or blood-poisoning, and in the majority of the cases the origin of the disease is to be traced to the hospital. In the very first year it was opened there were 19 deaths in St. Thomas's Hospital from that cause. Out of 110 fatal cases of blood-poisoning in the hospital 6 only arose outside, and of 485 cases of erysipelas 332 originated in the wards. Guy's Hospital in one year had 38 deaths from pyæmia. There seem to be no returns of the number of cases which were not fatal, but it may be assumed that they amount to a large number.

By recognising the hospital itself as a factor in the mortality of the patients, a revolution in the construction became inevitable. It may be doubted whether the builders of the older hospitals ever gave a thought to such a contingency as blood-poisoning; life or death was supposed to depend on the skill of the physician or surgeon and the constitution of the patient. Fifty years ago there were very few doctors who would venture to say that the blood could be a seat of disease, and architects are not to be blamed if they were no wiser than the doctors. Now a very different theory of life is held, and one might almost venture to say that the hospital of the future will be planned mainly with a view to the prevention of blood-poisoning. If that end be secured, it may be assumed that very little else is needed to form a perfect hospital. But the task is so difficult that some physicians have declared that satisfactory conditions are an impossibility in an hospital if it has been in existence for a longer period than five years, and that the periodical destruction of the wards by fire is a public duty. The Continental doctors are probably more advanced than their English brethren in their views on this subject; and the second division of the volume, on Hospital Construction, by Dr. MOUAT and Mr. SAXON SNELL, was therefore wisely assigned to a description of some of the hospitals in France, Germany, and Italy.

The first building described is the new Hôtel-Dieu in Paris. This building, which was opened in 1876, from its position is known to most visitors to that city. It stands near Notre Dame, and as it is bounded by the Seine, the parvis of the cathedral, and two wide roads, the site is fairly good. For the land, which has an area of over five acres, 720,000*l.* had to be paid. The buildings cost 687,690*l.* and the furniture 13,682*l.* As there is accommodation for 566 patients, the total cost per bed has been 2,510*l.* But, in spite of its cost, the hospital has been condemned by many doctors. One said it was a magnificent structure and a detestable hospital. What doctors want are simple, plain, quiet hospitals, which could be pulled down, renewed, removed, or otherwise dealt with as the necessities of the hour might require. A second authority said that the tent was the best type of hospital, then the hut, and lastly, the block hospital, that is, supposing the blocks were entirely isolated and exposed to the action of the air on all sides. The Hôtel-Dieu, being united by a central "corps de logis," was doomed to be a hot bed of infection should an epidemic arise in Paris. A third doctor said that the building

is so utterly bad it is impossible to turn it either into a large or a small hospital. Finally, it was resolved at a conference that the new hospital is so constructed as to be absolutely contrary to the fundamental principles of sanitary laws. A dozen years have elapsed since the evils inherent in the Hôtel-Dieu were first described, but it must be said that there is little to show how far the prognostications have been realised. As a concession to the opposition, the building was never carried up to its full height, but there appear to be more patients in the wards than were originally proposed. The objection to the hospital is that it is not on the plan suggested by TENON, a French surgeon, who died in 1816. One on that plan has been built at Menilmontant, near the cemetery of Père Lachaise. It has four main double blocks or pavilions, which are each four storeys high, and are connected at either end by corridors. But the floor space per bed is only about 107 superficial feet, while in the Hôtel-Dieu it is 125 feet, and the cubic space is proportionately less. The flooring consists of hollow brickwork and concrete, with timber joists and oak boarding beeswaxed and polished. The walls are finished with lime and powdered marble, brought to a polished surface like scagliola. Angular corners are supposed to be refuges for disease germs, and in the Tenon Hospital "all the angles formed by the walls one with another, and with the plastered ceilings, are rounded to a radius of about 6 inches." The sanitary arrangements of the hospital are not, however, up to the English standard.

If sharp angles are dangerous, there is much to be said in favour of the plan by M. TOLLET, which has been adopted largely in France. It was exemplified by drawings which were shown at South Kensington a few years ago; but then it did not attract much attention. The principle is that the section of a ward should be of an ogival form or pointed arch, and thus there is an impediment to the accumulation of disease germs. Air can circulate freely, and it is easy to cleanse or fumigate the interior. Wrought-iron rolled joists are placed about five feet apart, and are bent to suit the contour of the roof; the spaces between them forming the walls are filled in with brickwork, and the upper or roof portion with tiles, brick, or concrete. The whole of the inner surface is coated with plaster and finished with three coats of oil paint, the lower part being sometimes of lime and powdered marble with a floated surface. The system gives a large cubic space, the wards being 18 to 20 feet high, and the cubic area from 2,000 to 2,500 feet per bed. The cost of the system may be judged from the St.-Denis Hospital. It provides for 166 patients, and the building alone cost 40,000*l.*, or about 241*l.* per bed. But at Montpellier M. TOLLET is constructing an hospital where the cost for the freehold and building is not expected to be more than 114*l.* per bed. The question will be asked whether the system is deserving of approval. American experiments seem to prove that above 12 feet in a room there is little or no movement in the air except towards the outer ventilators; and as M. TOLLET's wards sometimes have an extreme height of 25 feet, the upper space may be considered a disadvantage. Mr. SAXON SNELL is of opinion that none of the buildings which have been constructed by M. TOLLET come up to the principles explained in the inventor's writings and plans.

There is apparently much to be said in support of the advantages of curved over plain surfaces for hospitals. In the new hospital at Genoa, founded by the Duchess GALLERIA, and which is to cost over three hundred thousand pounds, the principle has been adopted in a somewhat remarkable manner. We are told that "the ceiling over each pair of beds is vault-shaped, and is supported entirely independently of the floor, in order, it is said, that if the physicians should be at any time of opinion that disease germs have permeated the plaster, these ceilings could readily be removed and danger averted." Professor JOHN MARSHALL a few years since published a pamphlet in which he advocated circular wards, and a sketch of an hospital on a similar plan was submitted by Dr. BURDON SANDERSON to the Commission on Small-pox and Fever Hospitals. There would be twelve beds in a ward, arranged around a central chamber or shaft, each bed having a floor space of 178 superficial feet, and an air space of 1,780 cubic feet. Objections were raised against the system. It was said that in the circular wards in Antwerp and Baltimore the beds are arranged against the outer wall, and the patients are not disturbed by the light from the windows, and that Dr. SANDERSON's central shaft was too large; but both objections, if valid, could be got over.

\* "Hospital Construction and Management." By F. G. Mouat, M.D., F.R.C.S., and H. Saxon Snell, F.R.I.B.A. Published by J. & A. Churchill & Co.



Our time is, as regards hospital construction, one of transition and therefore of uncertainty. The science of medicine is being affected by new discoveries, which have their influence on hospitals. Many of the defects in buildings take their rise from the convenience of the doctors obtaining more consideration than the well-being of the patients. In England it is a great advantage to a physician when he is attached to a hospital; but the time he can spare for visits becomes limited in proportion to his success, and it is therefore necessary that facilities should be given for the examination of several patients in a short time. The wards are accordingly made large so as to hold a vast number of beds, although smaller wards would be safer for the patients, and more conducive to their ease of mind. Another reason for large wards is the clinical teaching, that is to say, patients must suffer for the sake of students. A third is cost of management, which is supposed to be in favour of the existing system. The ideal hospital would be one in which the patients' interests were paramount, and would contain a greater number of smaller divisions than is now adopted, and which might be sacrificed occasionally without much compunction. This plan is not so far from the French doctors' "tent" and "hut" as might at first be supposed. The authors of "Hospital Construction and Management" know the defects of existing hospitals, and we hope that some day they may have the courage to describe them. Their book is useful, as suggesting what efforts are being made to get over the difficulty of constructing an hospital that will be an auxiliary to a patient's recovery, without any interference with the established organisation of the medical and other attendants.

### THE BLENHEIM PICTURES.

THE following communication is from Mr. J. C. Robinson, F.S.A.:—The public in general and the Government are agreed that a selection from the Blenheim pictures ought to be acquired for the nation, but hitherto it has not seemed possible to come to terms with the Duke of Marlborough or his advisers. There are two principal points to be considered in this negotiation—first, the particular pictures to be chosen, and, secondly, the price to be paid for them. The advisers of the Government seem to have done their best to agree with the duke as to the pictures to be purchased, and they have made splendid offers for the selected works. I believe it is a fact that 120,000*l.* was in the first instance formally offered for three pictures—the Raphael *Holy Family*, the equestrian portrait of *Charles I.* by Vandyck, and the *Garden of the Hesperides*, by Rubens—but this sum was unhesitatingly declined. Another offer was then made of 80,000*l.* for two of the pictures—the Raphael and the Vandyck—but this was also refused. Nevertheless, it is the opinion of the most competent judges that these offers were amply sufficient, and that the duke was not well advised in declining them. At this stage of the matter it appears to me that discussion would be advantageous, for it may be assumed that there is a desire on both sides that the negotiations should not drop through.

The Marlborough family are in possession of a collection of pictures to which great celebrity and historic repute attach. Among them are a certain number of works of the very highest value, but the bulk of the collection consists of comparatively unimportant specimens. This being so, I apprehend that the best plan would have been to have brought the entire series to public auction. If that had been the course adopted, the nation and other powerful competitors being in the field for the choicer works, they would probably have commanded prices beyond all previous experience, while for the more numerous residue the prestige of the occasion would have attracted wealthy yet uncritical buyers from all parts of the world, eager to purchase good, bad, and indifferent pictures alike at unheard-of rates. This, indeed, is exactly what happened at the Hamilton sale two or three years ago.

The Duke of Marlborough and his advisers, however, seem to have had other views. Apparently they thought it would be possible to sell the principal works, sixteen or seventeen in number, for what may really be characterised as a fabulous lump sum, and to retain the residue for the decoration of the historic mansion as before. But the prices put upon these selected pictures were vastly beyond even the most exaggerated estimates formed by the various experts, both English and foreign, who examined the pictures for different clients. The national authorities, properly as I think, declined to entertain the purchase of the entire selection on this footing, and, although it is unwise to prophesy unless one knows, it certainly appears to me highly improbable that any infatuated Cressus will come forward to take these pictures on the stipulated terms, or anything like them.

Undoubtedly, in electing to pick and cull two or three pictures

only from the collection, the Government should have been prepared to pay a greatly enhanced price for them, for such a first choice would be sure to prejudice to some extent the sale of the remainder; but this enhanced price they may be held to have tendered, for it seems inconceivable that any other Power would have been found to offer an average price of 40,000*l.* each for the three pictures selected. Now, as to the pictures chosen, one of them, the Raphael, is unquestionably an unique and all-important work, but the same can scarcely be said of the other two. This country contains many other pictures, by Vandyck and Rubens, of equal importance. We have, indeed, just seen at the Leigh Court sale a magnificent Rubens—*The Conversion of St. Paul*—to my mind a work quite as valuable as the *Garden of the Hesperides*—fail to find a purchaser at a fraction only of the price put upon the Marlborough picture. As to the Vandyck, this is a huge gallery picture, doubtless of very high merit, but its size alone, as in the case of the Leigh Court Rubens, greatly detracts from its sale value, inasmuch as it would be difficult to find any private purchaser for it. Moreover, there are already two great equestrian portraits of Charles I. by Vandyck accessible to the public. These are the splendid picture in the Royal collection at Windsor Castle, a work certainly in no way inferior to the Marlborough picture, and the fine replica of the same picture at Hampton Court. On the whole, the nation could afford to wait, or even to do without this picture.

On the other hand, there are two pictures by Rubens in the Blenheim collection, of transcendent merit, which the nation has not yet taken into account. These are the full-length portraits of Rubens and his wife, and that of his wife alone. This last-named picture is certainly an incomparable masterpiece; in my own opinion, indeed, from its intrinsic excellence as a thing of beauty, good for all time, appealing to all alike in the same intelligible voice, this picture is even more precious than the somewhat archaic Raphael, and I cannot but think that its acquisition by the nation should be made a *sine quâ non* in any further negotiation. Moreover, as the other Rubens portrait picture is of very similar aspect, and scarcely less valuable, it could probably be better spared from the Marlborough collection than even the *Garden of the Hesperides*.

Meanwhile, it would be very desirable in the public interest, and it could only tend to the advantage of the owner, if the Blenheim pictures were again made accessible to visitors. It would be a great mistake if the interest now manifested on all sides were allowed to cool. Many unforeseen things might happen to prevent the renewal of negotiations for the nation, and a general feeling of distaste and depreciation might not impossibly follow as a reaction from the exalted estimate which has been formed of the Marlborough pictures.

### THE TEACHING OF DRAWING AND OF COLOURING AS A PREPARATION FOR DESIGNING AND DECORATIVE WORK.\*

By A. F. BROPHY.

IN the following paper I will try and give the most direct method of teaching a student how to draw, and as to colouring, the best method of receiving instruction from nature.

Drawing is all important—to draw is to create. Drawing is the body and soul of art; colour but the garments an artist's creations wear.

Every field and hedgerow presents numerous suggestions for arrangements of colour, from the most varied contrasts to the most subtle harmonies, all beyond the definition of a rule, and defying classification in the infinite varieties of their blending hues. Still, every colour is obeying the great law of fitness of tone for its position—a lesson the very best to govern all coloured schemes of decoration. Colour in decoration is entirely subordinate to drawing. A student taught to draw, whose observation has impressed him with colour, and whose education has been to observe the life, character, colour, and forms of what he sees around him in nature, has prepared a mind which a practised teacher can readily utilise. From the very first entry of the elementary student into the class, you must try and impress him with the idea that every drawing, even his first, is a complete work in itself—a training to the hand and mind—a work executed with care and interest, one in which the student not only receives a lesson in the perception of form, a lesson in technique, but one in which you give him an opportunity of exercising his invention. This idea should always be kept before him, that no matter what the material is in which he happens to be a worker, it will entirely depend upon himself, upon the conception of some idea of interest brought into his scheme of decoration or ornamentation, whether such work be a work of art or not. Upon these lines only can any scheme of teaching that pretends to help our industries be successful. You must love your labour to do good work,

\* A paper read at the International Conference on Education on August 6.



and you must think your work worthy of all your labour, and capable of becoming a work of art to love it. I think there is no greater mistake or one more calculated to injure our industries, than that a system of teaching should be adopted in technical schools that profess to educate decorative artisans, which would elect to make all students try for what may be called the fine arts, making picture painting the climax of their ambition, sacrificing the many for the sake of the few, who could transfer their work executed in the schools from their easels to the walls of an Academy exhibition. The mischief lies in the fact that those who would return to decorative industrial work would do so broken-hearted, labouring under the stigma of failure. They will never make good artisans; their heart will not be in their work, they will hope for the day when their attempts at pictures, and the works of their more talented fellow-students, taught under the same system by the same masters, will once more be side by side on the walls of an exhibition as they were in the days of their studentship in the schoolroom.

When our artisans are true to their name, art-workers, and when the public are educated so that they appreciate their efforts, then we may hope for art-work; that produced to-day will be fit to place side by side with the best of the old masters in our art museums. This can only be achieved by the simultaneous education of both classes—those who make and those who buy. The purchasers, or what is called the non-industrial class, should have lectures delivered to them illustrated by examples of the best art workmanship in different materials. I think a great impetus would be given to this if our art masters throughout the kingdom were allowed to reap the same benefit for teaching art design to the non-industrial as they do to the industrial class. I consider the policy short-sighted that encourages one and not the other. It is the educated man who supports good art, not the ignorant. I know of one industry that has a lecturer who takes with him from one town to another the best samples of old lace, and lectures to both those classes, the industrial whom he visits in their work-room, and the non-industrial, to whom he explains by illustrated lectures the art and history of lace, showing by reference to good old examples their beauties of design, thereby sowing the seeds of knowledge which have already taken root, and promise to blossom into commercial prosperity.

To describe the teaching of drawing and colouring to a student who is to become a designer and decorator, which is the principal object of my paper, I will try and explain his progress step by step, the work which he will be required to execute, and the materials in which he will execute it, so that he may have an idea of what drawing is, and how to observe colour.

I divide a student's training into three periods: the elementary, the historic, and the practical.

The elementary class period I think the most important, because of the difficulties to be overcome in capturing the student's whole attention, above all things not allowing him to feel his first work is a grind at something that will prepare him for art work; he must feel that he is engaged in making use of a useful material, and about to develop a work which will show some of his own feeling. To accomplish this place before him an outline drawing of some simple form, directing his attention to what the copy is, an illustration of which he is to make a note; then tell him he is to sketch it the correct shape, when it will be corrected as to form. The best material he can use to do this is willow charcoal, because of the freedom of line and the ease with which you can both sketch and erase. When the form is declared correct you may teach him how to hold and use a brush. The student now exercises his own taste or fancy in covering the form in some colour or colours. This brings all the student's powers into play at once. He feels when the form is declared right the pleasure is in store to exercise his own judgment in selecting the colours, and the finishing with brush outline gets a completeness in his work that becomes with him a habit through his career; he even learns from his failures what to avoid; above all, he learns to finish his work.

The examples to use in this class are copies in outline of objects in the South Kensington Museum or other art collections, a description of which is printed on each copy, and if the object represented is a piece of ornament that illustrates a style of ornamentation, or specially marks a date, it is so stated on the example, so that the copy at once becomes a study for the hand, information for the mind of the student, and also from his being taught how to hold a brush and lay a tint, this becomes his first lesson in what may be called the technique of painting.

During this elementary period the student is required to attend class lectures in geometry and perspective—the geometry to instruct him in methods of striking out geometric patterns, and perspective to prepare him for the next step in his teaching, drawing geometric models.

The first group of models that is placed before the student should be so placed that it will be easy to point out the application of the laws of perspective just learnt. For the purpose of correction I have found the very best method to adopt is to have a large sheet of glass that can be placed between the student's eye and the group of models, of which a freehand study has been made. On the sheet of glass there is a correct perspective drawing in white outline. This will help to correct the freehand study,

and show by ocular demonstration the correctness of the perspective theory.

The student, in working from these models, in every case works in some material that is identical with one that has a place in the industries.

No time must be spent drawing or shading in a material that is used for the sake of school practice only. Why should not a student learn the art of light and shade in a material that he may have in his hands every day? I maintain there is no industry in which any artisan has to work in which you cannot find some material by which he can be taught elementary art from the beginning.

When, with a knowledge of drawing and painting in some material, the student leaves the elementary and enters the historic ornament class, the best examples of the different styles are placed before him, to both draw, colour, and paint in the same material as the original, if possible. The first thing is to explain to him the art or beauty of the example, where it was used, whether as a piece of decoration it stood alone, or whether it formed a background for some other object, because its position has determined its treatment ornamentally.

If the decoration be a scheme of ornament that by repeating one motive becomes a diaper, then its consequent breadth of treatment must be explained to him, the necessity of accuracy and exactness of the repeat, so that each one will register in its proper place, and the part that the spaces between the ornament play in the effect of the whole treatment should be pointed out.

In the study of historic ornament that refers to diapers, attention should be drawn to the fact that they are always subordinate, and take their places as backgrounds, that their design and colouring are suitable to their position—the design, by repeating one motive only, not calling for any special attention; and the colouring, by being in tones of one colour or in colours so nearly allied in value, giving great breadth of treatment that will not attract from any object in front.

The next step will be to copy ornament that often, in strong contrast with the ground on which it lies, is dependent on its contour for its beauty. This class of ornament, which stands by itself, is of a higher grade, and having in it an evidence of life or growth, must have its character explained in copying. The correct feeling of the ornament is only to be obtained by the student working in precisely the same way as the original inventor; consequently in correcting the work much more stress must be laid on the life and growth of the different parts—their character in the details being felt—than their relative exactness of size or proportion.

To explain this, the most important part of my system, I will take for example a piece of Italian arabesque ornament, with scroll and subject introduced. The student sketches in charcoal the size of the subject panel; then, in striking the scroll, he is allowed a slight latitude in the size, so long as he draws that scroll with the same grace and with the same feeling as the original. To exactly measure, or even measure in an increased or diminished proportion, to obtain by precise points the exact position, through which must pass all the details of this scroll, will be to prevent the possibility of the drawing having the same grace or elegance; the work will look laboured and cramped, lack the go or vitality of the original. No ornament gives such pleasure as that which seems done with ease. Time spent in obtaining mathematical exactness in free-flowing ornament is misspent. The sooner the pleasure of drawing ornament quickly is felt, the better.

The lectures in technique in this class must be carefully given, the amount of work or finish in the ornamentation applied to each material depending on the coarseness or fineness of texture; and the processes through which the object has to pass, illustrated by examples of good old work, should be shown the student, in which these qualities have not only dictated, but even created the style of ornamentation. Before leaving this class, I would have all students to feel the necessity, when studying from ornament, to do so in a material in harmony with the subject. To attempt to copy the large rich foliage of the Roman scroll with a fine wire line, or attempt to render delicate light and shade examples, except in light and shade, is bad practice.

With these lessons the student is now in a fit state to receive the instruction in the advanced class that will complete his training.

In this, the latter period, to which I have given the name of practical, I only wish to give this especial name, because here, by bringing the student face to face with nature, I want him to acquire that knowledge and creative power that will so store his mind with material drawn from the life, that the filling of a space with appropriate ornament becomes to him an instinct, and he has merely to be given some object whose manufacture he understands to beautify it, either with new beauties of ornament that will emanate from his own mind, or in applying ornament that has a known character or style, to so apply it as if it was originally created for the object immediately before him.

Here also the charms of nature's colouring—always varied, never an exact repeat, changed to suit every position—should be carefully noticed.

The student commences the study of nature by having placed before him a plant in flower. In a given time he will be required



to make this study. To feel its precise value as a scheme of colour, he will have to execute this on some neutral background, white for choice. In the drawing he will be instructed, above all things, to catch the growth of the plant, how the leaves and flower spring from the stem, and in drawing the flower, how the different petals spring from the centre. Let the brush with which he draws suggest this growth even in the drawing. Let him not stop for exactness of size. Time, which is important in the drawing of plant forms, will be lost; also, there is a risk of losing what is more important still—the feeling of life or growth. A flower, a little different more or less in size, can still have the correct character, so also with a leaf, or group of leaves. The student now has the scheme of colour that the plant suggests pointed out: how the stems with their leaves and their varying tones of green take the place of a harmonious background to the flowers; how these flowers themselves often suggest arrangements of colour. What can be more beautiful than that given by a pale yellow rose, with its various tones from pale to deep rich gold, the centre giving those few touches of purer and more positive colour that are just wanted to make the scheme complete without disturbing the harmony? Here is a lesson for application. Take the flower, a harmony in yellow. This by careful study reveals the fact that although the harmony is complete every tone of yellow differs; still yellow is felt throughout as the predominant hue or colour. From the flower alone an exercise should be insisted on, the two conditions of all decoration work being given as the bases, one in which it is required to design a panel as a background, with a repeat of the plant giving the ornamentation as an arrangement in yellow, the other exercise a decoration that, not forming a background, shall have to stand by itself—an ornamental treatment of the plant.

This practice will serve as better lessons in colours than attempting to make all decoration subject to a rule that insists on the presence of the primary colours in certain relative proportions, a rule which if carried out would condemn those beautifully decorative treatments, a peacock-blue room, a gold room, a grisaille plaque, or a Henry Deux candlestick, treatments all of which are both beautiful in design and colour. Any rule would have to change every time the conditions varied, which would give a rule for every particular condition or position in which a decoration was placed. This would end in nothing but confusion. The sense of fitness for its position seems to me the only general rule that can be laid down for all decoration, whether coloured or not. For example, you may want to give a cheerful or brilliant tone to what may be a dark or badly-lighted room; on the other hand, a room that is so constructed that the sun is continually there may want subduing. Again, you have some gems of art workmanship that you wish to show to the greatest advantage; the coloured scheme of decoration used behind these can be so toned that the eye is satisfied that nothing interferes with the objects on which you wish to be able to concentrate all your attention; or, again, you may want in some hall or passage to the principal rooms to make the ornament the complete decorative finish of that part. Here ornament that asserts itself by strong contrast, and is pleasant to the eye by its beauty and variety of line, is evidently the right one for the position. Yet these ideas can only be put as suggestions. The artist's mind must conceive and carry out what is evidently appropriate, suiting his colour to the requirements of its position.

The next step will be to acquire a knowledge of animal forms, their actions studied from life, so that the student can use them in what position in his composition he pleases. Now, versed in all the difficulties of the technique of the material in which he is working he approaches the study of the human form, that is, and should be, the crowning knowledge of every ornamentist, and without which he can never give to any composition that interest which awakens the emotions. I would have him first draw the extremities—life-size, or as near life-size as possible—filling in the bones and muscles to the different parts, then attempting whole-length figures, executed in a given time, varying the exercise by making small studies of the figures in motion. These studies should be painted in tones of one colour; that would make the exercise one in drawing alone, colour being used to carry this to its utmost limit. When the student can make a complete study of the human form from the life, I would place him before an antique statue, that he might work from an admitted perfectly proportioned figure; then, on his return to the life class, I would require him to execute drawings of draperies on the figure, always trying to finish his study in the one sitting, varying the practice again by endeavouring in rapid sketches to catch the movement of draperies on the figure in motion, aiming in all his attempts at perfect draughtsmanship. When a student can draw the human form, some exercises in composition should be given him, to be wrought out in monochrome. Where the figure is used, his composition should be so designed that the action which he wished to convey was evident in the composition; the principal lines or masses leading up to it to give the required impression in all its strength, sacrificing the details for the sake of breadth. The value of this quality has been the strongest argument in determining that the student must work in monochrome.

The lectures to this class should be on the forms of animals, their habits and actions (assisted by instantaneous photographs),

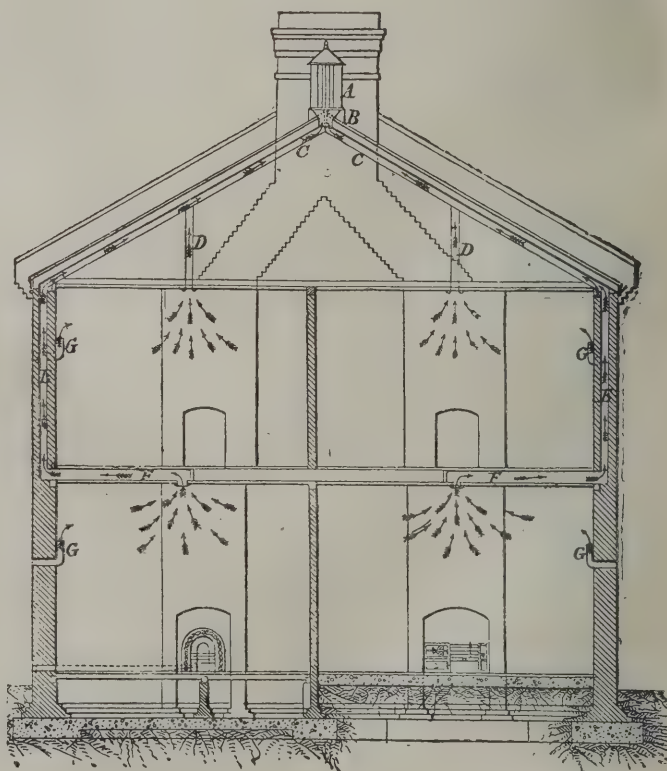
the anatomy of the human form, lectures on the different phases of the antique, also the impressions the best allegorical figures of the Renaissance give of action and repose. These lectures would be greatly enhanced by a supplementary course on the mythologies of ancient Greece, Rome, and Scandinavia, which, when understood, can be seized as part of a decorator's store, to add materials that would give interest and charm to his inventions. In this way we may hope to produce not only a designer but a decorative artist.

The highest art is that which contains the greatest thought combined with the greatest technical power.

In the many suggestions I have made for teaching drawing and colouring, I have kept within what I consider the true lines of instruction in what may be called technical art.

## VENTILATION OF WORKMEN'S HOUSES.

THE latest application which Messrs. Robert Boyle & Son have made of their system of ventilation is intended for workmen's houses and the houses of the poor. The inventors have long been of the opinion that if some simple and efficient ventilating apparatus could be devised at a cost that would enable it to be applied to even the poorest houses it would tend considerably towards the improvement of the public health in general. It is well known to medical men and sanitary officials that the pestiferous atmosphere which generally exists in the houses of the poorer classes is the cause of the majority of the diseases and fevers which haunt the more densely-populated parts of towns. This fact and the necessity of some economical system of ventilation were pressed upon Messrs. Boyle's attention ten years ago by Mr. Edwin Chadwick, C.B., but they were not in a position then to act upon his suggestions. They did not, however, lose sight of the question, and only waited until the public mind would be fully alive to the importance of the subject, when they could submit an improved system, with some hope of its acceptance. It is believed that the time has at last arrived, and the accompanying diagram shows the arrangement Messrs. Boyle propose to apply



for the purpose of securing a constant extraction of the foul air and supply of fresh air to each apartment without the slightest draught being felt by the occupants. The latter quality is essential, for it is a common experience that where ventilating openings are made, which admit of draught, they are at once closed and rendered useless as ventilators. A (see diagram) is a Boyle's Patent Self-Acting Air-Pump Ventilator, 16 inches diameter, fixed on the ridge of the roof. This ventilator, as is well known, continually extracts the foul air, and is entirely free from down-draught. B is a main shaft, 8 inches diameter, with divisional-plate in centre, to prevent the currents from the branch pipes striking each other and creating a swirl which would be injurious to the ventilation. CC are 5-inch diameter branch pipes connecting ventilator with  $4\frac{1}{2}$ -inch flues in the walls; D D are  $4\frac{1}{2}$ -inch diameter pipes connecting upper



rooms to branch pipes by means of 4-inch diameter holes cut in centre of ceilings; E E are  $4\frac{1}{2}$ -inch flues in walls communicating with spaces F F between joists and 5-inch openings in centre of ceilings, blocked on opposite side to flue G G G G. Air-inlet brackets, 10 inches by 5 inches by 3 inches, are fixed in the corner of each room furthest from the opening in ceiling, and about 6 feet from the floor. It may be frankly stated that Messrs. Boyle do not submit this system with any expectation of deriving a profit from the manufacture. It is introduced simply for the benefit of the working and poorer classes. The following description will suggest the amount of material and labour on one of the ventilators:—One 16-inch diameter Boyle's patent self-acting air-pump ventilator, made of galvanised iron and painted;  $1\frac{1}{2}$  feet of 8-inch pipe with dividing-plate; 30 feet of 5-inch diameter pipe; 8 feet of 4-inch pipe; two 5-inch junctions; two 5-inch knees; two 5-inch flanges; two 4-inch junctions; two 4-inch knees; four air-inlet brackets, 10 inches by 5 inches by 3 inches. When it is said that all the above will be made of strong galvanised iron, and will cost only four guineas complete, it will be plain that there is no charge for anything beyond the net cost of materials and workmanship. A plan and printed instructions are supplied along with each set of appliances. The system can be adapted to tenements at the same rates, every room in the largest block being ventilated separately. It can also be applied to existing buildings at a trifling extra expense. The Royal Commission on the Dwellings of the Poor, of which H.R.H. the Prince of Wales is so active a member, might with advantage give some attention to what Messrs. Boyle have devised, and which appears to be an effective and economical solution of a most difficult problem.

### THE IRISH ARCHÆOLOGICAL ASSOCIATION.

A MEETING of the Royal Historical and Archæological Association of Ireland was held in Armagh on the 6th inst., under the presidency of the Earl of Charlemont.

#### *An Irish Crannoge.*

Mr. W. F. Wakeman read a paper on a crannoge, or lake dwelling, which was lately discovered near Broughshane, and which is possessed of interest on account of the character of the objects found in it. They comprised—1. A sword-sheath in bronze,  $17\frac{1}{2}$  inches in length, richly decorated, and terminating in the figure of a snake-like monster's head. 2. One side of a second sheath slightly smaller than the former, covered with a profusion of so-called Celtic ornamentation, and exhibiting work in enamel of an extraordinary rare character. 3. An object composed of bronze, probably an amulet, the design and figure of which on either side constitutes a form of cross, which is not necessarily Christian. 4. An object in bronze, richly-decorated bands, in which are remains of white and red enamelled designs in a chevron or wavy pattern. 5. Three circlets of bronze, probably the rings of brooches or pins, one of which still retains enamel. 6. A small loop of bronze having the appearance of a finger-ring. Similar rings, however, have been found attached to pins. 7. A disc composed of thin bronze, ornamented upon one side with a graceful wavy pattern, the opposite face being plain. 8. Two objects in bronze, in form not unlike that of a modern door-handle. 9. Two pennannular rings of bronze, each measuring one inch and three-eighths in external diameter. They are perfectly plain and hollow. The metal of which they are formed is of extreme thinness, scarcely thicker than good note-paper. 10. A rivet-like piece of bronze. 11. A small stud of bronze, which may have belonged to one of the sheaths. 12. Portion of an armlet of jet. 13. A bead of opaque dark blue glass, relieved with streaks of white of the same material crossing each other obliquely.

The Rev. H. W. Leet presented some notes on remains in the county of Armagh. He was aware of the existence of four cairns, five kists, two crannoges, three pillar stones, two sepulchral mounds, seven raths, one stone fort, six churches, two hollowed stones, five crosses, one abbey, two bawns, eight castles, &c.

#### *An Irish Church.*

A paper by Mr. R. A. Young, architect, on the church of St. Columbkille at Knock, near Belfast, was also read. The author said that in Pagan times the site must have been a place of importance, as there are evidences of note still existing to justify this conclusion, notably a very large tumulus, or funeral mound, on which formerly stood a cromlech, the stones of which are now displaced, situated at a short distance from the site of the ancient church. The *Dublin Penny Journal*, in 1835, gave a woodcut of the ruined church as it then appeared, showing the two gables nearly perfect, one pierced by a square opening near its apex, the other with a traceried window. The author made his drawings and measurements in 1869, when the church was in a further state of dilapidation by the destruction of the western gable, of which only a fragment remained, and the mutilation of the eastern one, which had been deprived of the upper portion of walling. The interesting east window was, however, in much the same condition

as in 1835. Mr. J. H. Burgess, in 1872, made two sketches, which are probably the latest representations of the building, as soon after the eastern wall fell to the ground. The church has now completely disappeared owing to indifference on the part of those who should have taken an active interest in its preservation, although efforts were made by some local antiquarians to prevent this catastrophe. The space formerly occupied by its walls has been appropriated for grave lots, the foundations being removed for this purpose. The building measured 48 feet in length by 23 feet 6 inches in breadth externally. The walls were 3 feet in thickness, built of large field stones of the local silurian rock. The entrance doorway was probably in the western wall, which terminated in a gable with a square aperture below its apex, as shown to exist in 1835. The side walls were, no doubt, pierced by windows, but no trace of them remained. The most interesting feature was the eastern gable, which retained the upper portion of its original semicircular window, which had evidently been divided by a central mullion into two lights, with pointed heads and spandrel between, formed by their intersection. Relieving arches of rough stone were placed over the window internally and externally. The arch stones were grooved to receive lead lights, and holes had been cut at intervals for the insertion of Irish stanchions to secure them. A mason's mark, like a capital E, was incised on the under surface of one of the jamb stones. A window of the same design as regards the tracery exists in the little church of Logio, near Stirling, Scotland, as seen in the drawing made by the author some years ago. A square stone with a human head of life-size carved in high relief was inserted on the south side of the window, about six feet from the ground level. The carving was much defaced, but enough remained to show that a likeness had been intended of the shaved face of an ecclesiastic. The gravedigger employed in 1869 said that it represented the head of St. Columbkille. It is probable, from the position it was placed in, that the stone had been a relic of a much earlier church. The wall below the window was torn away in a suggestive manner. The western wall had been treated in a similar manner, as evidenced by the drawing in the *Dublin Penny Journal*. The sad fate that has overtaken in recent years this interesting old church adds another melancholy instance to the fate of Castlereagh. It may perhaps act as a warning of the danger of allowing ancient ecclesiastic and prehistoric structures to be left to the mercy of men who are in complete ignorance of the loss that the country sustains in the destruction of such monuments of its past history.

#### *Irish Metal Work.*

Mr. J. J. Phillips read a paper on a wrought-iron grille which still remains in the village of Richhill, near Armagh. Even the casual observer is struck with the dignity and breadth of treatment of the entire, and with the clever manner in which each field of vertical bars is alternated with panels of characteristic scroll work, the upper parts enriched with forgings, forming a sort of *chevaux de frise*, while the gates are crowned by convoluted and foliated forgings, which uphold the arms and crest of the owners, the details of which are manipulated with great taste and refinement. Sufficient effect is produced by simple treatments of the hammered bar without aping cut-stone mouldings or wooden carvings, or placing sheet-iron festoons and garlands in the humid atmosphere of the island, as is found so frequently done in the contemporaneous art iron work in England and the Continent; and where foliage is introduced here it is legitimate smith work, coming clean from the anvil, without filing, boldly forged out of the solid iron, and not flimsy *applique* of sheet iron work, which is the curse of modern art smith work for outdoor purposes. The vertical bars are 1 inch square, the gate horizontals  $2\frac{1}{2}$  inches by  $1\frac{1}{2}$  inches, the gate framings 2 inches square, the scroll work being 1 inch by  $\frac{3}{4}$  inch and  $\frac{7}{8}$  inch by  $\frac{1}{2}$  inch, tapering down. All through the work there is a moderation in the use of ornament other than constructional, and a sense of fitness for the purpose designed. The hammered bars and scrolls are not overlaid with sheet work, but depend upon the balance of arrangement in the straight bars and in the flowing curves. The main purpose of the structure as gates and railings is not lost sight of; and the vertical treatment is even emphasised by the decorative arrangement of the panels or grilles, which occur at intervals, and give rhythm to the composition as well as serving to frame in each field of verticals, and where, as cresting to the gate, the scroll work is allowed liberty and freedom in its rich and flowing lines in the spirals and the wrought-iron foliage, yet the entire has a playfulness in its conventionality, which shows the art power of the designer.

A **Mediæval Procession** will take place at Bruges at the close of August, and will be representative of incidents in the life of St. Charles the Good, the patron and former sovereign of the city. The dresses and appurtenances of the eleventh and twelfth centuries will be reproduced; and it is said that many of the highest ladies in Belgium will take part in the procession, and, wearing the costume of their ancestresses, will assume their parts as ladies in attendance on the court of their ancient count.



## NOTES AND COMMENTS.

It was characteristic of Mr. SHAW-LEFEVRE that he should not seek to force the scheme for the restoration of Westminster Hall on the House of Commons after hearing the speech of Mr. PEDDIE. The present First Commissioner of Works has endeavoured to carry out the duties of his office in the fairest way, and if the majority of archaeologists are found inimical to Mr. PEARSON's plans, we may assume that the proposed buildings will not be erected. It is, however, possible to go too far in succumbing to archaeology, which, in this case, has the advantage of being related to economy. The position of the proposed additions is in some respects the most important part of the group formed by the Hall and the Houses of Parliament; and by a liberal expenditure of money it could be made one of the most picturesque parts of Westminster.

THE first action taken by the representatives of the people who were killed by the fall of the chimney at the Newland Mills, Bradford, in December 1882, was tried in Leeds on Tuesday and Wednesday. The jury were unable to come to a decision on the points which were most essential. The owners of the mill went so far as to agree upon the damages which should be paid in case a verdict went against them, but the question was how far they were responsible for the negligence. The late Sir HENRY RIPLEY was one of those foolish men who think they know more about building than architects and builders. Apparently, as a matter of form, he employed architects to draw plans for his big chimney, but he altered the design, and had the work carried out according to his own whims. It was inevitable that the chimney must fall sooner or later, but are heirs who came into possession on the 9th of November to be made responsible for a catastrophe which occurred on the 28th of December, or a little over a month from the commencement of their ownership? A few days before the fall the agent called in Mr. ANDREWS, an architect, who thought that there was no immediate danger; but he asked if the engines could be stopped in order to make an examination of the interior. Engines cannot be stopped at a moment's notice, for it means suspension of work, and is therefore dependent on the orders which are in hand. The jury, however, seemed to be of opinion that the architect should have had the fires put out forthwith, although the mill was supplying power to several others. On this everything turned. If the architect was wrong and misled the agent, were the owners of the mill guilty of negligence? It is no wonder that, having created such a puzzle, the jury were unable to solve it, and both plaintiff and defendants can meanwhile claim the first trial as a victory.

THE exhibition which will be held at South Kensington in 1885 is to be of so comprehensive a character that it will be difficult to find space for all the objects which are to be shown. The title "Inventions and Musical Instruments" is not very happy, and suggests SHAKESPEARE and the Musical Glasses; but what's in a name? Irrespective of music, there are to be thirty-one classes, which are as follows:—Agriculture; mining and metallurgy; engineering construction, and architecture; prime movers and means of distributing their power; railway plant; common road carriages; naval architecture; aeronautics; manufacture of textile fabrics; machine tools and machinery; hydraulic machines; elements of machines; electricity; apparatus connected with applied chemistry and physics; gas and other illuminants; fuel, furnaces, &c.; food, cookery, and stimulants; clothing, jewellery, leather, india-rubber, and gutta-percha; furniture and accessories, fancy goods; pottery and glass; cutlery, ironmongery, &c.; firearms, &c.; paper, printing, &c.; clocks, watches, &c.; philosophical instruments; photography; educational apparatus; toys, sports, &c. These groups are so extensive it is difficult to see what is to be left for the year following to exhibit, unless objects which have been invented prior to 1862.

THE exhibits which come under the head of engineering construction and architecture will suggest the range of the proposed exhibition. *Roads*.—Methods and materials for constructing and paving roads, cleansing roads and pavements; road-sweeping machines, rollers, apparatus for the removal of mud, snow, &c., water-carts and other means of watering. *Railways and Tramways*.—Construction, excavators and

appliances used for earthwork and tunnelling, permanent way, rails, chairs, sleepers. *Bridges and Viaducts*.—Models, plans, and designs for arched, girder, suspension, trestle, and other bridges; apparatus used in construction. *Docks and Harbours*.—Models, plans, and designs for docks, harbours, piers, breakwaters, &c.; submarine construction, diving apparatus, dredging machines; pile-drivers, screw-piles, coffer-dams, graving docks, "patent" slips, caissons, pontoons, floating docks, hydraulic apparatus for working dock-gates, &c., gridirons, buoys. *Lighthouses*.—Methods of construction, appliances used in lighthouses and in lightships, fixed and flashing light apparatus, lamps, sound-signalling apparatus. *Rivers and Canals*.—Conservation and improvement of rivers; construction of canals; locks, lifts, and inclines; weirs. *Water Supply and Sewerage*.—Methods of collecting, pumping, storing, filtering, and distributing water; appliances for detecting and preventing waste of water; water-meters, water-fittings, filters; sewers, sewage disposal and utilisation. *Reclamation, Irrigation, and Drainage of Land*.—Drainage (natural and artificial) of low-lying districts, embanking and warping land, irrigation works. *Testing Apparatus*.—Apparatus and instruments used in testing iron, stone, brick, concrete, cement, &c. *Military Engineering and Fortification*.—Military topography. *Materials Used in Building*.—Bricks and tiles, machines for making them; concrete, artificial stone, cement, materials, and appliances used in their production; asphalt, roofing felt, and other roofing materials, columns, girders, and other applications of metal in building; applications of terra-cotta to buildings; preservative and fire-resisting materials, paints, &c., for application to stone, wood, iron, &c., methods of applying the same. *Building Construction*.—Models and plans showing methods of construction, non-combustible constructions; labour-saving and other machines and appliances used in building, scaffolds, elevators; fittings and appliances used in building, shutters, blinds, lifts, bells, speaking tubes, &c. *Heating, Ventilation, House Drainage, &c.*—Sanitary appliances, ventilators, cowls for chimneys, chimney-sweeping apparatus, apparatus for heating by steam, water, air, &c.; means of cooling air.

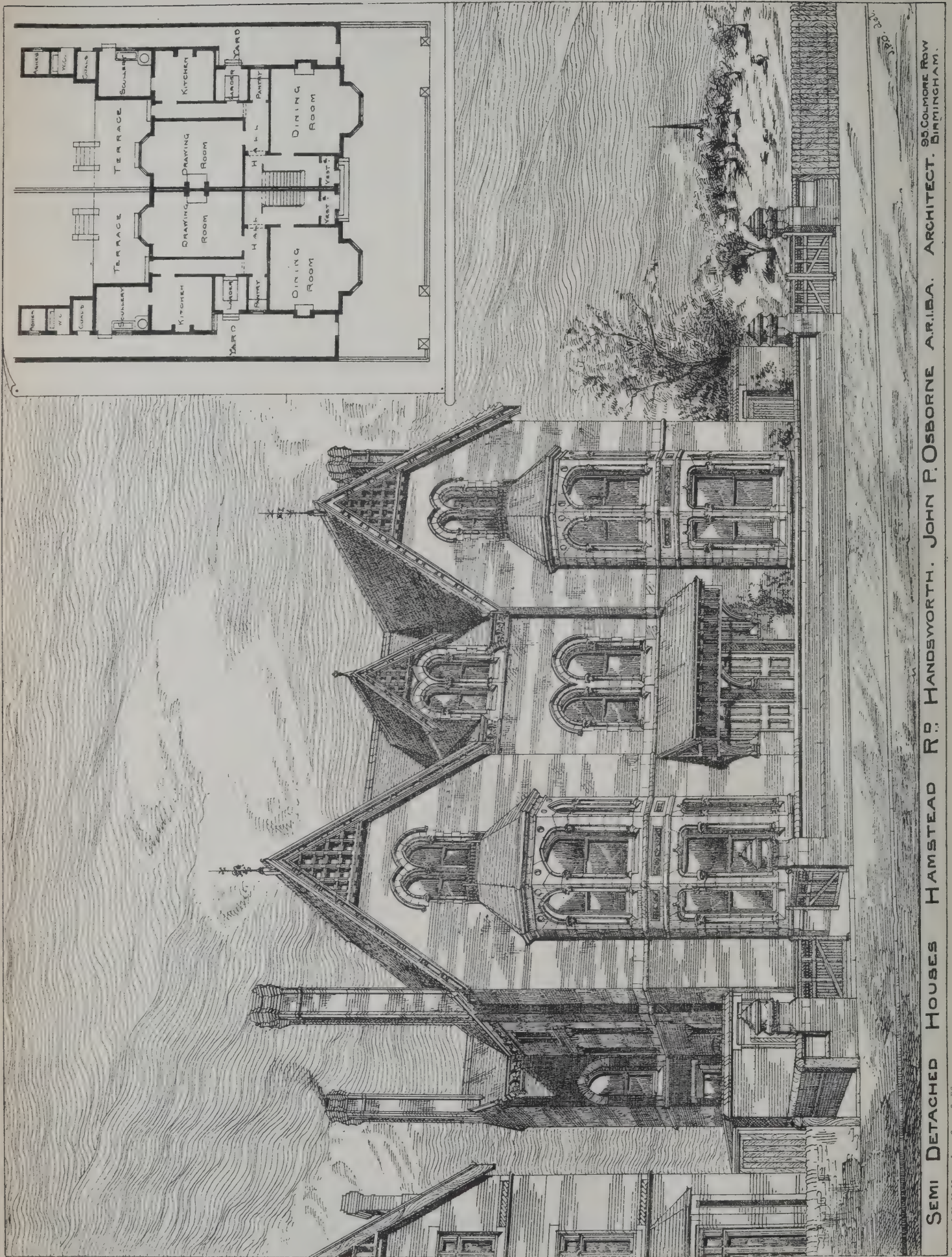
THE lighting of the Health Exhibition has been acknowledged by all visitors to be a great success. There is certainly as well as brilliancy, and the peculiar noises which so often accompany all systems of electric lighting are absent. The success is mainly owing to the perfection of the engines by which the electro-dynamo machines are driven. Six engines and eleven boilers have been designed and constructed by Messrs. DAVEY, PAXMAN & Co., of Colchester, for the purpose, and they have been running for several months without a single stoppage. The engines are fitted with the automatic expansion gear invented by Mr. PAXMAN, and to its use the great regularity of the lighting may be attributed. On no former occasion has so complete a collection of electric light plant been exhibited, and the shed in which the engines are found will well repay a visit from everyone who admires highly-finished machinery.

THE International Conference on Education at South Kensington will not be fruitless if the establishment of art museums in schools should be carried out, as recommended by the Head-Master of Rugby. A museum is found to be useful in several ways. It supplies the drawing-master with excellent examples, in both form and colour, the classical and historical teacher with the original of many a simile in the old poets; with the photograph of many a classical site, temple, or ruin; with the portrait, on coin or medallion, if not in life-size bust, of many an emperor, king, reigning favourite, general, or statesman; with the emblem of scores of cities in Italy, Greece, Asia Minor, and the Isles of the Ægean; with whole scenes from the civic or religious life of Greece, as in the reproduction of the Panathenaic Procession from the Elgin marbles; and to the student of the Middle Ages or the Renaissance of more obvious value still. Indirectly, an art museum is a great instrument for refining and elevating taste, and since an art museum was opened at Rugby a totally different and vastly better style of decoration has been adopted by the boys in their private rooms. The Rugby Museum was rather expensive. The buildings cost 9,000*l.*, the collections about 5,000*l.*; but in other places a less ambitious scale would serve. Boys as well as masters at Rugby contribute 10*s.* 6*d.* a year towards the expenses, and in this way about 200*l.* a year is obtained.









SEMI DETACHED HOUSES HAMSTEAD R.D. HANDSWORTH. JOHN P. OSBORNE A.R.I.B.A. ARCHITECT. 95 COLMORE ROW BIRMINGHAM.









"INK-PHOTO". SPRAGUE & CO., LONDON.



















Aug<sup>1</sup> 16<sup>th</sup> 1884.











VILLA AT COOMBE WARREN, SURREY.  
F. NESBITT KEMP, ARCHITECT.

JOHN P. JONES







## ILLUSTRATIONS.

## EASTERN CHESS PLAYERS.

**A**MONG the American artists who have settled in Paris and worthily uphold the reputation of the Western Continent, Mr. F. A. BRIDGMAN holds a prominent position. He has long since made his mark, and his pictures are among the most admired in the annual *salons*. Mr. BRIDGMAN was born in Alabama in 1847, and after studying in the art schools of Brooklyn and New York he became a pupil of M. GÉROME. From that artist he has acquired a love of Eastern life, which is almost unrivalled in the opportunities it presents for richness of colour, novelty of situation, and dramatic incident; but, happily, Mr. BRIDGMAN has remained unaffected by his master's cynicism when treating Eastern subjects. Whether in such everyday scenes as we illustrate, or in historic scenes like the *King's Sport*, exhibited at the Royal Academy a few years ago, and which represented an encounter between an Assyrian monarch and a lion, Mr. BRIDGMAN appears to be alike successful. In one respect his pictures are remarkable, and that is for the management of light and shade. An illustration in black and white has the drawback of failing to indicate colour, but it forms a test of chiaro-oscuro, and our plate will enable the public to understand one quality of Mr. BRIDGMAN's work. A painter who has already succeeded so well may be safely assumed to have a still more prosperous career before him, and America may be proud of so able a representative in art.

## STUART HOUSE, CADOGAN SQUARE.

**T**HE illustration of this house, which we publish to-day, is from a drawing exhibited in this year's Academy. It is a fine specimen of what can be done with good brickwork in thin courses with machine-made moulded strings partly rubbed. The effect of the double bay at angle is very pleasing internally, and we hope shortly to publish a detail of this feature of the building.

Messrs. HUNT & STEWARD and Mr. F. G. KNIGHT were the architects, and Mr. TITMAS, the builder.

## SEMI-DETACHED HOUSES, HANDSWORTH.

**T**HE houses shown in the illustration are situated on the Heathfield Estate, near Birmingham. The walls are of red brick, with stone dressings and Broseley tile roofs. Stourbridge glazed bricks have been used for the walls of bath-room and water-closets. The works have been carried out from the designs and under the superintendence of Mr. JOHN P. OSBORNE, A.R.I.B.A., 95 Colmore Row, Birmingham.

## VILLA AT COOMBE WARREN, SURREY.

**T**HIS illustration represents a private residence which has been erected on a portion of the Duke of CAMBRIDGE's Estate at Coombe, for Mr. W. T. PRITCHARD, from the designs of Mr. FREDK. NESBITT KEMP, architect, of 22 Chancery Lane, London. The contractor was Mr. J. J. GREENWOOD. The walls are in red brick, with black courses at the floor lines, ground floor bays in stone, the projecting windows of upper floors and gables being in timber framing, filled in with Portland cement, rough cast, and the roof covered with Broseley tiles. The premises contain four reception rooms, winter garden, greenhouse, gardener's dwelling, and stabling on ground floor, with the domestic offices in the basement, and eight bedrooms, dressing-room, bath, &c., over, besides good accommodation for coachman and gardener, with about two and a half acres of well laid out gardens. The house is particularly well situated, within a short distance of the railway station, Richmond Park, and Wimbledon Common, and commands very extensive and beautiful views.

## NATIONAL PORTRAIT GALLERY.

**T**HE twenty-seventh annual report of the trustees of the National Portrait Gallery has just been issued. The report states that the trustees have much satisfaction in including amongst their list of donations a copy in water-colours of Professor H. von Angeli's portrait of the Queen, by Lady Abercromby. The trustees also record with much pleasure the acquisition of five highly interesting legal portraits presented to them through the public spirit and liberality of the Principal and Antients of the Society of Barnard's Inn. The list of 286 donations, as given in their former

reports, June 9, 1883, may now be continued as follows:—Her Majesty Queen Victoria—a copy in water-colours, after the original portrait at Windsor Castle, taken in 1875 by Professor H. von Angeli; General James Wolfe, drawn by the Duke of Devonshire; Annie Jamieson, a bust by John Gibson, R.A.; Mary Somerville, drawn by J. R. Swinton. The following pictures, in accordance with a suggestion from the Chairman of the Board, Viscount Hardinge, also a trustee of the National Gallery, and with the full approbation of the trustees and director of the National Portrait Gallery, have been deposited in the National Portrait Gallery:—Sir David Brewster, LL.D., K.H., the philosopher, being the last picture painted by Sir J. W. Gordon; John Fawcett, the comedian, by Sir T. Lawrence; John Ha'l, the engraver, by Gilbert Smart; John Philip Kemble, as Hamlet, by Sir T. Lawrence—the portrait which has been often engraved; John Milton, by Pieter van der Plaas; Thomas Morton, the dramatist, by Sir M. A. Shee; the Right Hon. William Pitt, by Hoppner; Sarah Siddons, by Sir T. Lawrence; John Smith, the engraver, by Kneller; Wm. Smith, the comedian, by Hoppner; Sir John Soane, R.A., the architect, by J. Jackson; Catherine Stephens (afterwards Countess of Essex), the vocalist, by J. Jackson; Benjamin West, P.R.A., by Gilbert West; Right Hon. Wm. Windham, by Reynolds; Wm. Woollett, the engraver, by Gilbert Smart; King Edward III. and family, tracings from the original figures on the wall of St. Stephen's Chapel, Westminster; Edmond Malone, the Shakespearian commentator, by Reynolds; Joseph Hume, M.P., the politician, by Walton; General James Wolfe. The following pictures were presented June 11, 1884, by the Principal and Antients of Barnard's Inn:—Thomas, Lord Coventry; Sir Wm. Daniel Knight; Sir John Holt; Lord Chief Justice of the Queen's Bench, Sylvester Petyt; Wm. Cecil, Lord Burghley, K.G.; Benjamin Franklin; Admiral Sir Edward Codrington, G.C.B.; Captain Sir Thomas Bouchier, R.N., K.C.B.; Charles Fitzroy, second Duke of Grafton, K.G.; John Ker, third Duke of Roxburghe, K.G., K.T., a caricatura. In the previous report the purchases were stated to amount to 393. They may now be continued as follows:—Jonathan Richardson; Sir Henry Unton; Geo. Villiers, first Duke of Buckingham, K.G., and family; Sarah, Duchess of Marlborough; Joseph Addison; Thomas Cecil, first Earl of Exeter, K.G.; Sir Wm. Waller.

## THE ROYAL ARCHÆOLOGICAL INSTITUTE.

**T**HE annual meeting of the Royal Archæological Institute commenced at Newcastle-on-Tyne on the 5th inst. The members were welcomed to the city by the mayor, who, in his speech, briefly reviewed the history of the place. The President of the Institute (Earl Percy, M.P.) in replying said that thirty-two years had passed since they met in Newcastle, and it was gratifying to find a city which in the van of progress had not forgotten the claims of the past, or would not allow them to be crowded out by those of the present.

*The President's Address.*

The Duke of Northumberland then delivered the presidential address. His Grace maintained that there was no part of England which afforded so great and varied a field of interest for the archæologist as the Northumbrian district, and, in conclusion, said:—The daily life of the natives of the county was characterised by the rudeness and absence of culture and civilisation which a state of constant disturbance and danger naturally produces. He who is liable to have his house burnt over his head at intervals of five or six years is not likely to be very choice in his domestic arrangements. A most amusing description is given by an Italian who accompanied an envoy from Rome to the Court of the Scottish king, James II., in the fifteenth century. Lodged in a peel tower near the Tweed, he tells how the men came flocking into the fort, not deeming that anything worthy of notice would happen to wife or children, though they had to take refuge in the tower to secure their own lives; how they stood round the table as he dined, and passed from hand to hand bread given them as an article they had never before seen, and how the writer was astonished at finding the monks of the priory in which they were quartered on the Scotch side giving to the poor a dole of "black stones," to wit, coals. This state of things will sufficiently, I think, account for the comparative poverty of design and execution which generally characterises the ecclesiastical architecture, and which finds a counterpart in the stern and bare outlines of the military buildings. This is exemplified in the castles and towers with which this county is studded, where we have nothing to compare, I think, to some of the fortresses on the western frontier, or to Warwick, unless it be in the instance of Warkworth, which is a very curious and skilful attempt to combine domestic comfort and external beauty. Yet Prudhoe, Bamburgh, Dunstanborough, Norham, and Mitford are grand and striking examples of the feudal stronghold. When the feudal power declined, and more especially after the union of the crowns, many of these last were naturally abandoned, and fell to ruin, as the surveys made in the time of Henry VIII. and



Elizabeth show. Some, nevertheless, remain, additions having been made in subsequent reigns to fit them for more refined usages and habits of life than were aspired to by their first masters. Chipchase, Chillingham, and Belsay present most pleasing instances of this very picturesque combination. The remains of the ecclesiastical buildings are numerous and interesting; witness Hexham, Brinkburn, Holy Island, Tynemouth Priory, &c., and the details of their architecture will often be found very curious. But the rage of the destroyer has fallen heavily on most of them. The fine lines in "Marmion" describe well the results of the storm which swept over the Church of Rome in Henry VIII.'s days. Of all those I have named, and more that I have left unnoticed, Hexham only remains undestroyed. The rest present but ruined walls and desecrated shrines, save in the case of Brinkburn, lately restored to the proper condition of a place of worship by the munificence of its owner. You will be able to judge, if I may have the pleasure of seeing you at Alnwick, how complete the destruction there has been from the result of the excavations now proceeding; and, indeed, the reports of those who were entrusted with the survey of the buildings granted by the king to private individuals, are loud in their complaints of the injuries resulting to the Crown from the ruthless demolition of those edifices.

A vote of thanks to the Duke of Northumberland was proposed by Lord Aberdare, and seconded by the Bishop of Newcastle. Afterwards there was a reception by the local Society of Antiquaries, and the castle and cathedral were visited.

#### *The Provincial Spirit.*

In the evening the historical section was opened with an address by the Rev. Canon Creighton. Archæology, it was said, had done much for history in the past; it had gathered evidence of times when written records were silent; it had pieced together fragments of the life of the days of old, when the human voice was still inarticulate; and had settled disputed points, by appeals to the eye, on which there could be no doubt. In archæology, as in all other sciences, there were those who said that almost all had been done that could be done. Records of stones had been ransacked, explained, classified, and interpreted. Even if that were so, which was scarcely the case, there remained innumerable traces of the past still unrecognised and unsuspected. Local character, habits, institutions, modes of thought and observation—all were the result of a long process, differing in different parts of England. They were only to be seen and understood by a sympathetic searcher and observer, who looked upon each part of England in the light of its past; who saw that part, not only in ancient buildings here and there, but on the whole face of the land, and in the hearts and lives of its inhabitants. He admitted that this was no easy task; he admitted that the results of such inquiry must at first be very hypothetical and its conclusions tentative. But he thought that the inquiry was well worth pursuing, and it must be pursued speedily if at all. The present century had seen an enormous change pass over the whole of England. Local customs, local peculiarities, even local dialects were rapidly passing away. Men no longer live contentedly in the houses where their fathers lived before them. He said that English history had been provincial. It was rapidly ceasing to be so. Railways worked every year unnoticed transmigrations of people multitudinous beyond the host of Ida the Flame-Bearer. School inspectors demanded for the children throughout the land uniform knowledge, uniform ideas, and, as much as might be, uniform pronunciation. Our old provincial character was doomed to destruction. Unless its remnants were carefully gathered, the key would be lost to much that would be of growing interest to the antiquarian. Of this provincial history, no part of England possessed clearer traces than did Northumberland. It had always held the same position in English history from its very beginning. It had always been a border land. It was true that the border had varied in extent; but whether it were great or small, Northumberland had always been within it, and had generally formed its chiefest part.

The antiquarian section was opened by Dr. Bruce with a short address on the early state of Christianity in Northumbria.

#### *Alnwick Castle.*

On Wednesday the castles at Warkworth and Alnwick were visited. Both buildings were described by Mr. G. T. Clark. In the course of his address at Alnwick Mr. Clark said:—Probably this was the seat of a considerable Saxon estate, for at the Conquest it was certainly a place of some importance, and was speedily erected into a barony, and to it were attached sixty manors held by military service. The post was one of great danger, but to whom it was at first confided is uncertain. William was but once in Northumberland, when he visited Scotland in 1073, and carried fire and sword throughout the Border. Whether he was at Alnwick is unknown, but he must have crossed the Aln, and could not but have noted its capabilities as a line of defence. Duke Robert, his eldest son, paid an inglorious visit to the Border in 1080, and William Rufus was there both in 1091 and 1093. The Tysons are reputed to have held the barony during these visits, probably in some degree under the Mowbrays, whose possession of Bamburgh gave them great power upon the Border. The

earliest known Lord of Alnwick is, however, Yvo de Vesci, who was there towards the close of the eleventh century, and died before 1135. He certainly began the present castle, but Alnwick was already known by the death very near to it of Malcolm Canmore in 1035, who there closed his life and his fifth invasion of England. How the position was then defended is unknown. Probably, as was usual, the Norman lord contented himself with the Saxon defences, much like those in use in his own country, until he had time to replace them by works in masonry such as were then coming into general use. That this was so is rendered probable by the fact that the earliest existing masonry is late Norman, of about the year 1150. Had there been an earlier Norman keep it would not so soon have needed to be replaced, so that it may safely be concluded that the gateway now standing was part of the earliest castle in masonry; and further, from its dimensions and ornate character, and from the detached fragments of masonry of a similar date preserved in different parts of the *enceinte* wall, it may also be inferred that the new castle was on the present lines, executed in a handsome manner, and fitted to be a great frontier fortress and the residence of a wealthy and powerful baron. The rugged and dangerous life of a border baron of the twelfth century was very fatal to a long descent in the male line. De Vesci's heir was his daughter. She married Eustace Fitz John, who completed his father-in-law's works before his death, in 1157, leaving what is described as "a strongly fortified castle;" and no doubt his desire to complete it was quickened by its having been taken by David of Scotland in 1138, a few months before the defeat at Northallerton. The son and successor of Eustace adopted the family name of De Vesci, and in his time, in 1174, William the Lion of Scotland ventured too near to the castle, and was there taken by Ranulph de Clarville, the author of our first legal treatise, but also a great soldier. The new De Vescis came to an end in 1297. William, the last lord, left only a natural son, and constituted as his guardian the celebrated Antony Bec, Bishop of Durham, a warlike and not over-scrupulous prelate, who led the second line at Falkirk. Bec converted his wardship into a fee, and finally sold the castle in 1309 to Henry Percy. Percy was descended in the fourth degree from Jocelyn of Lovaine, of the House of Brabant, who married Agnes de Percy, and assumed her name, retaining his own arms. Sir Henry became Lord of Alnwick in 1309, and died in 1315. He seems at once to have taken the castle in hand. Castle building under Edward I. had undergone great improvements. The concentric, or Edwardian arrangement, had indeed been long anticipated at Alnwick, but flanking defences had come into use, and Percy recast the mural towers, giving them a stronger form and a bolder projection, and so arranging that each could be held, at any rate for a time, supposing the enemy to have entered the outer or middle ward. He seems to have introduced the portcullis, not always found in Norman gateways; to have constructed the gate-house, and to have built or rebuilt the great hall, kitchen, and other domestic buildings on a very handsome scale, though apparently within the lines of the old keep, which was probably a mere shell of masonry, with lodgings, as at York and formerly at Windsor, built within and against the walls. What the first Sir Henry commenced, his son, the second Sir Henry, completed. To him is due the inner gate-house, which, with the barbican and middle gate-house, completed the triple approach to the keep. No doubt there was always a wall dividing the two wards, but the Percys converted it into a spur-work, connected with the middle gate, so that even if an enemy breached the wall and obtained possession of the outer and middle wards, he would still be exposed to be harassed from the front and flank, as well as from the mural towers in his rear. The Percys continued to maintain the castle in good order, and the son of Hotspur obtained a license for walling the town in 1434. In those days the castle could accommodate a force of 3,000 men at arms, and forty hobelers, or light horsemen, and its lords were not men to maintain such a body in idleness. As was said of the Douglasses, they preferred "hearing the lark sing to the mouse squeak." All were men of action, of whom four fell in battle, one in a tumult, and three died in a state prison. Although not originally built by the Louvain Percies, it is remarkable how completely Alnwick has become identified with their name and fame. "The famous castle of a famous race." The salient points of their character, often opposed, are always striking. Headlong valour, military skill, great severity, and a courtesy not less great, a love of personal display, ample gifts for religious purposes, a great independence of priestly dictation, are qualities displayed continually by one or other of their line. Their figures, as we see them represented within the churches of their foundation, clad in complete armour, and surrounded by all the pomp of heraldry, but with sheathed swords and palms lifted up and compressed in prayer, present no imperfect illustration of their character. When the noblest and most popular of English ballads represents the Percy of his day as bending over his slain foe, and taking the dead man by the hand, it but expresses the strange and striking combination of savage warfare with the softest touch of humanity with which poets, rather than historians have painted the age of chivalry. The fame of the Lords of Alnwick was mainly earned upon the Scottish Border, and became a memory only when the two kingdoms became one. After the



accession of James the Northumbrian castles ceased to be of any military value, and the latter Percies resided chiefly upon their southern estates. One, however, the tenth earl, took an active part in public affairs, and sided with Essex and Manchester in the Parliamentary war. Neither the Percy heiress nor the Dukes of Somerset, her husband and her son, resided at Alnwick, and it is said that the first Duke of Northumberland found the castle in such a state that it was proposed to transfer the seat of the family to Warkworth. Happily for a later generation, this idea was laid aside, and between 1750 and 1780 the keep was restored in what was then considered to be the perfection of good taste, of which a very painful example may still be seen at Arundel. These restorations lasted till our time, until the accession of Duke Algonon in 1847. The Duke was a shrewd man of business, and possessed of great natural taste, much improved and expanded by foreign travel. After having well discharged his duties to his tenantry, to the Church to which he belonged, and to the county in which he held so large a stake, he set himself to work to restore the seat of his fathers to more than its ancient splendour. Happily he received the aid of Mr. Salvin, who, more than any architect of his day, understood how to restore, to rebuild, and even to add, without in any degree departing from the lines of taste and symmetry.

The parish church at Alnwick and Hulne Abbey were afterwards visited under the guidance of Mr. J. T. Micklethwaite.

#### *Church Restoration in Northumberland.*

The architectural section was opened by the Rev. Canon Raine, who said that in offering some preliminary remarks upon the great theme of architecture, he should endeavour to give a few descriptive hints and suggestions which wayfarers, such as they were, might find of some little use, as they inspected some of the chief objects of architectural interest which Northumberland could still exhibit. It was out of the domain of history that he looked upon the handiwork of ancient builders. The dates which the historian discovered were the framework upon which the whole system of architectural science was laid down. It was history, likewise, which reproduced men and manners, feats of arms and the achievements of the gentle life, without which stones were mere stones, and wood and water, the forest and the moor lost half their charm, and there was added to history in Northumberland the poetry of legend and tradition which invested tower and stream in this wide district with its own inimitable grace. Domestic architecture in Northumberland from the very earliest times was the architecture of defence, as was the case, although to a less extent, upon the borders of Wales. The Roman Wall, and the Roman fortified towns, which guarded or were strengthened by it, all told the same tale. From the earliest times to the beginning of the seventeenth century they had a record of local feuds and national strife, resulting frequently in bloodshed, and generating at all times hatred and alarm. Castles and towers stood in all parts of the county for defence, while under and around many of them the dwellings of the poor clustered for protection. Had religion no controlling power over the Borderers? Not much, he feared, when they were told that the thieves were good churchgoers, and that they were never more intent upon their devotions than on the eve of some great plundering fray or raid. Nor did the Reformation make any difference—at least, not for a considerable time. In Northumberland they found a composite style of architecture peculiar to itself. He must refer his hearers to the numerous specimens in the district of interlacing or basket-work, as it had been called, of a most interesting kind. In many localities there were few churches in the walls of which such carvings had not been found, and in a few churches there were remains of Saxon masonry as well. We had no Domesday Book in the North to show what churches were then in existence; but he thought that investigation, where documentary evidence failed us, would sooner or later show that wherever there was a parish church in the counties of Durham and Northumberland a century ago, there was a parish church on the same site in pre-Norman times. He might mention, with no small satisfaction, that there was every probability of these early sculptured remains being perpetuated by the graver's art at the cost of the University of Cambridge. That was a just tribute of respect to the country of Bede and Cuthbert. He trusted most heartily that before that meeting closed some message of gratitude and promise of help would go forth to Cambridge, possessing as that university already did a thousand claims to the sympathy and respect of the old kingdom of Northumbria. It was at Hexham that they would find the most interesting remains in the county of Anglo-Saxon work, and they might mark the influence of the place in the churches in the neighbourhood, beginning with Ovingham. At Holy Island and Farne—still more sacred ground—there was little of that date; there was next to nothing also at Tynemouth—later building had obliterated or concealed it; but at Whittingham, Edlingham, Bolam, Whalton, Longhoughton, and other churches they would find Saxon towers or masonry, whilst the interlacing sculpture met their eye in many of the churches and churchyards. He would ask them to contrast the condition in the last century with that of the present day. There had certainly been a most remarkable change. In the archdeaconry of Lindisfarne nearly every church had been either

built or restored within the last thirty years, not always wisely or well, but still assuredly not in the spirit of that Northumbrian vicar whom he could name, who chiselled away a whole corbel-table formed of grotesque heads, as he thought his congregation looked too much upon them when they ought to have been looking at him. In the archdeaconry of Northumberland there had been less done, but still a great deal. He was unwilling to criticise. He remembered an old friend of his making the caustic remark that mediæval architects erected buildings which we were unable to restore. He did not agree with that, but he did think that in far too many cases ancient remains had not been sufficiently respected, and that modern architects had often entirely overlooked the feeling and character of the architecture of the district in the work they carried out. Every county—nay, various parts of each county—had architectural features peculiar to themselves, with which an architect ought at least to make himself acquainted. There was an unhappy phrase in vogue describing the renovation of a church—"It has undergone restoration." It used to be—"It has been beautified." Now it is worse still—"It has undergone renovation." Poor church! He often thought what pangs it must have suffered! The stones must surely have been crying out. He was not one of those who would retain even discomfort and decay, and keep them empty rather than improve and preserve them. By all means they should make their church as fit as they could for the claims it had to meet, but they should value the past a little more than had been the custom. The most dangerous person of all was he who loved uniformity of style, and in his fabric would reduce all styles to one. That man sacrificed the historical story of his church to a very foolish caprice. Generally speaking, church vestries had far too much latitude and freedom of action allowed to them. Would they permit him, in conclusion, to make two or three practical suggestions? (1) Let every bishop have the advice of an architectural expert or experts before any structural changes were made in any church. The wanton mischief that had been done in the absence of such a rule as this was lamentably great. He could give many instances, and would mention two. Twice had he known the rebuilding of particular parts of churches urged and adopted on the plea that they were tumbling down. In each case, instead of tumbling down, they obstinately refused to fall or be moved. Were they allowed to stand, as they were perfectly able to do? No; in each case the architect vindicated the correctness of his ecclesiastical diagnosis by blowing the part up with gunpowder. (2) Whenever the fabric of a church was touched, let careful drawings and exact plans of the parts altered be first efficiently made and deposited in the diocesan registry. (3) Let greater attention be paid to monuments and inscriptions. They were being destroyed nowadays by hundreds and by thousands. He would simply remark that the legal value of these inscriptions was second only to that of a parish register; nay, in many instances they were far more useful, and that it was illegal to destroy them. To him it was most objectionable to see the monuments on a chancel floor sacrificed to an array of encaustic tiles, which in tone, colour, and comfort were infinitely inferior to the old grey or blue stones. Time was when such tiles were rarely seen out of a church; now one found them better laid and better cleaned in the passage of every second-rate hotel. Surely it made the church itself more solemn to see that under their feet were lying the dead of former generations. Were these memorials to follow in the wake of far too many memorials in this shifting age and perish with them? It was impossible, of course, to avoid the moving of such monuments occasionally, and if they spared them, time would not. He earnestly recommended that in all possible cases a full copy of the inscriptions in a church and churchyard should be taken by the minister, and that the copy should be deposited in the parish chest. If such a record were made decay was obviated, and removal was robbed of much of its mischief. He was glad to say that this suggestion of his had been already adopted in some cases, and he could not see why it could not be advantageously carried out in many more.

Mr. W. H. D. Longstaffe moved a vote of thanks to Canon Raine for his very interesting paper. With reference to the granting of faculties, he was of opinion that it was an illegal proceeding, and he should like to see the matter tested at law. The Church of England just now—he meant the archbishops and bishops—were going so entirely against the law of the land that some step should really be taken to stop their proceedings. He did not think that the clergymen should be punished, as they were so ignorant of church architecture. With regard to so-called restorations, which were not restorations at all, but were simply destructions, he entirely agreed with the remarks in that matter made by the president of the section.

Mr. Hodges seconded the motion. With regard to the rebuilding operations at St. Albans Abbey by Sir Edmund Beckett, a more wanton destruction of an English church had never been perpetrated. The destruction of the Abbey was now almost complete. He condemned the practice of removing the memorials of the dead from the interior of churches and replacing them with caustic tiles. He suggested that in order to aid in putting an end to this they should support the National Society for the Preservation of the Memorials of the Dead.



The motion was carried unanimously, and the meeting of the section terminated.

#### *Lindisfarne.*

On Thursday there was an excursion to Holy Island, when the Dean of Chester delivered an address on Lindisfarne Priory.

Mr. J. T. Micklethwaite said the ruins were an exceedingly interesting study, from which they could learn not a little, because they showed what a Benedictine church of the twelfth century was. All Benedictine churches were built in the eleventh and twelfth centuries. They were altered as people got more room or more ambition, till very often very little of the original work was left. Here it was not so. This work had not been free from alterations, but it retained its original character more than any other Benedictine church he knew. There was no tradition of an old cathedral there at all. It was an entirely fresh beginning in Norman times, irrespective of anything that might have been on the site before. The old church, part of the Scottish manor, might not have been such a shabby thing as some of their friends thought. It certainly was a wooden erection, but it was probably a fair size, because they could compare it with what they knew to have existed in other places. With that later building, however, they started entirely free from any previous structure. The apsidal end and other evidences seemed to indicate that the abbey was entirely Norman, and had been built at two periods.

Mr. Hodges differed from Mr. Micklethwaite in regard to the old Saxon church. He had carefully examined the ruins in company with eminent local antiquaries, and they came to the conclusion that the architectural history of the church had been written wrong all through. They believed it was all bosh about a wooden church; and that the site was the site of the Saxon church of Lindisfarne. He thought in the apsidal end they had the remains of a Saxon church. He should tell them that the church was built about 1130, after the nave of Durham Cathedral was finished, or was still going on; and it was almost a copy on a small scale of that cathedral.

Mr. Micklethwaite said Mr. Hodges's theory was a very tempting one, but he could not accept it without further testimony.

The parish church was inspected, and the rector exhibited some old registers and other records. There is a sketch in the vestry of the priory which was taken in the last century, when the building was in a less ruinous condition than it is at present.

#### *Bamburgh Castle.*

The visit on Friday was to Bamburgh, where was founded if not the first fortress in Britain the first Saxon work of which we know the date. Ida landed there and founded Bamburgh, and so completely were the Celtic inhabitants overwhelmed, that his name has descended to us as Ida the Flame-Bearer. Mr. Clark described what remains of the castle. He said they had come to see Bamburgh, and he hoped they would go away with a very pleasant impression of Bamburgh as being one of the grandest sights in the kingdom. As to the building, whether this or that particular piece of stone was of this date or that date, they could hardly tell. They had had a grand view, and must be content to go away with a grand impression. They had seen the interior of the keep, but it was not there they must study the interior of Norman keeps. That they must do at Newcastle. The exterior, however, had not been much meddled with, and it had some peculiarities. In the north they were to see, or had seen, some very fine specimens of Norman keeps. Newcastle keep, like that at Dover, was one of the most perfect specimens of late Norman keeps. At Bamburgh and Prudhoe they had rectangular Norman keeps. At Alnwick they had a very fine specimen of a shell keep; and at Durham next week, in viewing the grand combination of the cathedral and the castle, they would see another shell keep. They would thus have an opportunity, while in the north, of judging for themselves as to whether the rectangular or shell form of keep was the finer. Norman keeps were constructed for passive resistance, and one of the most successful modes of taking them was by undermining.

#### *Sculptured Stones.*

At the evening meeting in the antiquarian section, the Rev. G. F. Brown read a paper on "The Fragments of Sculptured Stones at Monkwearmouth and Jarrow," which was illustrated by a large number of rubbings. Mr. Brown pointed out the different features of the various sculptured stones at the two churches, and compared them with sculptured crosses and stones found in other parts of the country. The interlacing and scroll kind of ornamentation found in Wilfrid's work was, he pointed out, based on Roman ornamentation of a ruder character, and pointed to a time when there was a blending of the Roman and Celtic Churches. In support of this argument he showed rubbings from Roman remains now in the Black Gate Museum, belonging to the Newcastle Society of Antiquaries, and pointed out the resemblance between the style of ornamentation on them and on Wilfrid's work. He expressed his belief that many of the crosses found in ancient churches were older than the churches, and had stood at stations where the early Christian missionaries preached. He concluded by stating that the authorities of the University of Cambridge were considering the question of publishing autotypes

and historical descriptions of the ancient sculptured stones in the country, and hoped to obtain much assistance from local societies. The Newcastle Society were prepared to do the work in this district, and, if other societies would attend to their respective districts and co-operate with the university, he hoped the work would be done well.

The Rev. J. R. Boyle said he trusted there would be an expression of opinion in favour of the work which Mr. Brown had stated the University of Cambridge were engaged in. He felt sure that the members of the Newcastle Society would do their part both in work and expense. These sculptured remains were the earliest memorials of Christian art in the kingdom; they belonged to a time when Christianity was planted in these northern counties; and told us something of the spirit in which Wilfrid and those who worked with him laboured.

Mr. Evans said there was one element in this work to which particular attention should be drawn, and that was the Celtic element. The Roman and Teutonic influences were to be traced; but still more were the life and spirit of the ornamentation to be traced to the Celtic art, which was still existing in Britain at the time the Romans left the country. Some of the details of the ornamentation fit on to the details of the ornamentation found in the later Celtic work, and that work could be traced to a time before the Romans came to England. No finer specimens could be found than on the line of the Roman wall, in the castle here, and in the collections of Mr. Clayton and Mr. Blair. The great characteristic which separated the remains found in the north and west of Britain from those found in southern Britain was, that in the north there was a really living system of ornamentation; and that ornamentation was Celtic. It was owing to Celtic missionaries that Christianity first set foot here. It was thought by Mr. Brown that the crosses probably existed as centres of Christian worship before churches were built; and that might be supported by the view that the word church or kirk was said to be really derived from cross.

#### *St. Peter's, Monkwearmouth.*

The visit on Saturday was to the Saxon church of St. Peter at Monkwearmouth. The Rev. Mr. Boyle explained that the oldest parts of the structure were the lower part of the tower and the west wall of the nave. The edifice of which these were portions was the work of Benedict Biscop, who in 674 brought workmen over from France for its erection. The upper part of the tower belonged to the latter part of the eighth or the beginning of the ninth century. Mr. Boyle pointed out the evidences on which these conclusions were founded, and directed the attention of the party to some of the finer work of Biscop's workmen still in existence. The west wall of the nave was not bonded into the tower, and was probably built shortly before the tower. The chief features to be noticed in this wall were the two windows which undoubtedly represented the width and height of the original nave. They were interesting on account of the close resemblance to them of those at Jarrow, and also on account of the balluster shafts *in situ*. The delicacy of these balluster shafts was very marked in comparison with those of Jarrow. He had no doubt that the masons of Jarrow were Saxon, and that they copied, with less skill, the work of the French workmen at Monkwearmouth. The church had been renovated by Mr. Johnson, of Newcastle, and in the vestry were several balluster shafts and sculptured stones which Mr. Johnson found while carrying out the work.

The Rev. Mr. Brown remarked that the sculptured stones *in situ* in the tower were fast perishing on account of being exposed to the outer air, and unless something was done to save them they would have completely perished in our generation. He suggested that they should be carefully removed and placed in the vestry, beside the other collection.

Mr. Johnson said he was afraid that these stones could not be removed without endangering the whole tower. He would like to ask if it would not be possible to build a porch or screen round them so as to protect them from the atmosphere?

Mr. Micklethwaite said several old Saxon churches, with towers like that at Monkwearmouth, originally had a chamber to the westwards of the tower. Mr. Johnson told him that there were evidences of such a tower having existed in that case; and he would suggest that if such a chamber were erected again it would serve the purpose of protecting the stones they wished to preserve. Such a work in Mr. Johnson's hands they could depend would be excellently done.

Afterwards the church at Jarrow was visited. The chancel was said to be Saxon, and dated from about A.D. 681, while the tower and monastic buildings were Norman, probably between 1075 and 1083.

At the evening meeting a paper was read on the Saxon churches of Northumberland and Durham, by the Rev. J. R. Boyle.

On Monday the Chesters and the Roman wall were visited. Among the papers read at the evening meeting was one by Mr. R. P. Pullan on "The Discoveries at Lanuvium."

**The Island of Herm** has been sold by Messrs. Debenham, Tewson, Farmer & Bridgewater for about 7,500*l*.



## EXAMINATION QUESTIONS.

THE following are some of the latest examination questions relating to building which have been given by the Civil Service Commission to candidates for various departments:—

Give a vertical section, quarter full size, through both the wood and stone sill of a window-opening in a 14-inch brick wall. The stone sill to be 10 inches by 6 inches, resting on 9-inch brickwork. The wood sill to be 6 inches by 4 inches, the top being 2 feet 9 inches from floor line of room, with the bottom rail of a 2-inch double-hung sash resting on it. The section to be continued down to the floor line, showing a framed and panelled window-bank.

Draw, to a scale of  $1\frac{1}{2}$  inches to a foot, a cross-section of a 16-inch hollow brick wall, showing both glazed stoneware bonding bricks and galvanised iron bonding ties.

Draw, to a scale of  $1\frac{1}{2}$  inches to a foot, a section through three steps of a wooden stair, with 12-inch treads and 6-inch rise. Treads to be  $1\frac{1}{2}$  inches, with moulded nosings, and 1-inch risers, rebated and grooved to treads both edges; to be glued and blocked and supported by brackets nailed to a 6-inch by 3-inch rough string.

Draw, to a scale of  $\frac{3}{4}$  inch to a foot, the plan of a fireplace on an upper floor, with a 3-foot opening, 1 foot 6 inches deep. The main wall to be of stone 20 inches thick, and the chimney-breast of brick with a 14-inch by 9-inch flue running up on each side. Part of the floor round the hearth to be drawn, showing, on one side, 7-inch battens and a 4-inch oak margin, and on the other the naked joists, the common joists being 9 inches by 2 inches, and the trimmer and trimming joists 9 inches by 3 inches. Draw, to the same scale, a vertical section through the centre of the fireplace, showing a brick trimmer arch; also the ceiling carried on 3-inch by 2-inch ceiling joists. This plan and section to be coloured.

Draw, to a scale of an inch to a foot, the central cross-section of a wrought-iron box girder 60 feet by 5 feet by 19 inches; flanges to consist of four  $\frac{1}{2}$ -inch plates, webs of  $\frac{3}{8}$ -inch plates connected to flanges by  $3\frac{1}{2}$ -inch by  $3\frac{1}{2}$ -inch by  $\frac{1}{2}$ -inch angle irons; the rivets to be  $\frac{7}{8}$  inch.

Give a working drawing of a cast-iron pile shoe, with wrought-iron straps, for the foot of a whole timber guide pile.

Draw a part elevation of a stone pier for a bridge, showing irregular coursed or snecked rubble, the quoins to be rough punched with drafted margins.

A floor of 7-inch by  $1\frac{1}{2}$ -inch battens, secured to 3-inch by 2-inch fillets, is supported on Portland cement, concrete, and brick arches springing from the lower flanges of 12-inch by 6-inch rolled iron joists, placed 7 feet apart, these being carried by cast-iron columns 6 inches external diameter at neck. Give, to a scale of  $\frac{3}{4}$  inch to a foot, a cross-section through one bay, showing the construction of the floor, including the heads of the columns below. This drawing to be coloured.

In taking out the quantities of carpenter's work, what constitutes the difference between "fir fixed" and "fir framed and fixed"?

Taking an ordinary timber king-post roof, enumerate the different members under these two heads.

A wooden floor, 28 feet by 16 feet, consists of fir joists 10 inches by  $2\frac{1}{2}$  inches resting on ordinary wall-plates, two rows of herring-bone struts, and  $1\frac{1}{2}$ -inch battens ploughed and tongued. Take out the quantities for the same.

Explain how you would measure up the following:—Rubbed and gauged semicircular arches to door and window-heads. Chimney shafts and ornamental caps to ditto, in brickwork. Window sashes and frames. Slatting to roofs. Iron roof trusses. Down pipes and eaves gutters. Painting to doors, skirtings, and iron railings.

Give a section, to a scale of 2 feet to an inch, showing an 18-inch brick wall with a concrete foundation resting on stiff clay, 3 feet below the surface. The wall to be shown to a height of 2 feet above the ground level, and to be provided with a damp-course.

Specify the nature of the concrete and mortar you would use for the above work, there being good stone lime available.

What description of wooden roof truss would you use over a 25-foot span? Give a sketch elevation of the same.

Explain, by sketches or otherwise, the meaning of the following terms:—Flitch girder; rebated and filleted floor-boards; saddle-backed coping, throated; tile creasing.

What is the difference between a double floor and a framed floor? Give sketches of the same, showing the names of the different members.

Give sketches showing the ordinary section adopted for cast and rolled iron girders respectively.

What is a discharging arch? Show how it is applied in the case of a wood lintel over a door opening.

Describe the method of fixing lead flashings on the rake, against the end of a chimney shaft, in the case both of brick and of stone.

Show by sketches the difference between a ledged door and a framed and braced door.

Give a section through one side of an ordinary window-frame for 2-inch double-hung sashes, showing all the details.

Explain and illustrate the meaning of the following terms as applied to brickwork:—Batter, squint-coin, underpinning, brick-nogging.

Give the sizes of the different kinds of slates, and explain by sketch the meaning of laid to a 3-inch lap.

Explain the object of the damp-course, and state the different materials which are used for this purpose.

Give detail to a scale of 1 foot to 1 inch of 2-inch sashes and frames, double hung.

Draw to a scale of 4 feet to 1 inch a flat roof, covered with lead, size 20 feet by 16 feet, and give sectional detail of same to a scale of 1 foot to 1 inch, against wall, showing flashing, joists, &c.

Give plan to a scale of 4 feet to 1 inch of a timber floor, size 30 feet by 22 feet, showing trimming for staircase, 12 feet by 4 feet, in one corner, and give detail to a scale of 1 foot to 1 inch, showing girder, binders, floor and ceiling joists.

Draw to a scale of 4 feet to 1 inch a king-post roof, 26 feet span, and mark the names of the various timbers, and figure their scantlings.

The bottom flange of a cast-iron girder is 9 inches wide, depth of girder 12 inches, thickness of metal 1 inch, and length of bearing 18 feet. What is its breaking weight in tons in the middle?

Give the quantity of materials necessary for covering 90 yards, one coat work, with oil colour.

Explain the difference between pan and valve closets, and give sketch of a valve closet.

## BODIAM CASTLE, SUSSEX.\*

IN the year 1386 leave was granted to Sir Edward Dalyngrudge to erect and crenellate a castle at Bodiam. Thus is fixed for us the date of this building, just at the time of the introduction of that style of architecture which is called Perpendicular. It was built by a man then aged forty, who had passed his early manhood in France, under the leadership of those who in the great and glorious wars of Edward III., in which the superior discipline of the English had made them triumphant against great odds, had achieved the victories of Cressy and Poitiers. On his return he had married the heiress of the Wardedeux, and so became the Lord of Bodiam. He was one of the trustees of the kingdom during the minority of Richard II. We judge, therefore, that we are about to examine the work of a man who had large experience of affairs, both in France and England, then, indeed, at deadly feud, but which were, nevertheless, the leading nations of the world in all that regarded civilisation, art, and chivalry. The use of gunpowder had been introduced into war, but its ultimate consequences had not been fully foreseen; thick walls were still regarded as a safe protection, and their liability to fall on those who trusted in them under the fire of cannon was not yet realised. It was not as a mere exhibition of his power, and to gratify his taste as a soldier, that Sir Edward Dalyngrudge obtained leave to build himself a castle. Twice within a recent period had the town of Winchelsea suffered from the ravages of the French, and he who had carried war into France, and seen its effects there, may well have feared lest under the feeble rule of Richard II. England, and especially its southern coast, might in its turn suffer invasion.

On entering the courtyard of Bodiam, however, and picturing to one's self the two storeys of buildings now destroyed, but yet so easily to be traced as having been built against its almost perfect outer walls, one cannot help thinking how like after all this courtyard must have been to the interior of a mansion of no military pretensions, or even to the quad of a college. Here is no keep as at Lewes, Rochester, Arundel, Porchester, and a hundred others, where a garrison pressed to the last extremity could hold out for months, or even years, and wait for succour from without. Here are no tortuous ways along which an enemy who has attained one part of the fortifications must pass and expose himself to a flank attack before he reaches the next stage of the siege. The gates are strong, indeed, but were they forced the castle would be taken. We may, I think, therefore, consider that we have before us the work of a great soldier, anxious to secure himself from attack from foreign and domestic foes, and to add to his social and political importance, by building a castle in which he and, let us hope, his wife, the heiress of Bodiam, might live with considerable comfort and luxury. He selects a new site at a distance from the old mansion, and forms an ample moat, a moat so ample that one wonders whether its width had any special reference to the artillery range of the period. The site having no special features, the building takes a perfectly symmetrical form. The moat is crossed by drawbridges from the north, duly defended by a barbican capable of holding a small garrison. We may still see the place of its portcullis, and the winding stairs to the upper floor. Next is the main entrance between two towers. Over the

\* A paper by Mr. Lacy W. Ridge, read at the annual meeting of the Sussex Archaeological Society.



entrance are the arms of Bodiam, Dalyngrudge, and Wardedeux. Here are grooves for three portcullises, and we may yet see the outer one in its place, shod with iron spikes and lined with iron. In the vaulted roof of the gateway are holes for raining down on the assailant stones, melted lead, scalding water, or any other of those barbarous missiles used in war before the introduction of the "villanous saltpetre." At the top of the towers machicolations are provided for the same object as a means of defence against those who, with the aid of battering-rams or by mining, were engaged in an attack on the gates or walls. The large stone corbels carry a projecting parapet, and between them are holes through which the missiles were dropped. From the battlements like missiles and arrows were also poured on the assailants. Artillery, however, worked disadvantageously from so high a position, a dropping or plunging fire being manifestly far less destructive than that sent in a line parallel with the ground. Hence, in the lower storey of the towers we find embrasures for cannon, presenting externally a round aperture sufficient for the passage of the shot, with a thin slit above for sighting the gun. In the interior the embrasures are widely splayed to give room for working the gun. The curtain walls have battlements, but are without machicolations, their defence being provided for by the projecting towers. The towers at the angles are round, those in the centre of the sides are square; all were duly provided with battlements, but the southern or near tower only had machicolations.

The recognised mode of attack against such a building before the use of cannon became general would be to fill up parts of the moat, and gradually advance wooden towers against the walls, from which they could be advantageously attacked and ultimately scaled. Catapults would be used for throwing heavy stones against the walls, and archers would be watching their opportunity should any defender show himself above the battlements. Frequently mining would be resorted to, and the foundations of the walls being removed, they would be propped up with wood. This would be set fire to, the wall would fall, and a breach be effected. When, however, the attack on Bodiam actually occurred in the Wars of the Roses, it seems highly probable that the establishment of a battery of artillery on the earthwork on the rising ground to the north was sufficient to compel a surrender, for had a cannonade taken place we should hardly see so perfect a military ruin as it is our privilege to-day to visit. With the surrender of the castle in 1484 to the party of Richard III., just within a century of its erection, the use of Bodiam as a castle and a residence ceased. In the state of internal disorder in the kingdom, it became pretty evident that the fortified castles of the nobility were a source rather of internal danger than a means of defence against external foes. With the Wars of the Roses and the accession of Henry VII. castles in England became obsolete. In France they lingered longer, and in Scotland and on the border fortified houses had yet a century or more to prevail. In England the residences became almost purely domestic, and to the domestic side of the building before us we have now to turn. The very short time the castle was in use prevented any alterations from taking place, and that which remains to us may be regarded as wholly the work of the original founder.

Immediately opposite the main entrance is the door of the great hall, an apartment running the full height of the building, with the dais, bay window, and the only large window looking through the outer wall, and with a south aspect at its eastern or principal end. At the western end is the buttery screen, with the minstrels' gallery over, to which access seems to have been attained by a wooden stair. Next, with its door in the angle of the quad, is the kitchen, with two enormous fireplaces. The southern tower has a small portcullis, and this probably served as a postern or private entrance, reached, I should think, only by a boat, and so safe from sudden attack. Over the door are the arms of Sir Robt. Knolloyes, under whom Dalyngrudge served in Brittany. On the west side of the quad is an oven, and probably here followed laundries, stables, and other offices. An alteration, the only one in the building so far as I have seen, seems to have been made in connection with the two cross walls in this part. The east side of the quad was occupied by the private apartments of the knight and his lady. The south-east tower has a vaulted strong room. In the east tower there is said to be an oratory. The chapel, with its triple window, is easily distinguished. The altar step is visible, and there is a piscina. Adjoining the chapel is a sacristy with aumbrye, also a private gallery on the level of the first floor looking into the chapel. The north front probably furnished the apartments of the garrison. The towers were divided by floors into rooms, as the holes for the beams fully testify. Each room had its window and its fireplace, with back and hearth of hard well-burnt roofing tiles. The great attention paid at this time to sanitary matters may be seen by the constant recurrence on each floor of each tower of a well ventilated latrine, communicating by a shaft or flue with the running water of the moat. Neglect of sanitation was of later date. Turret stairs, finished with ornamental battlements, lead to the top of every tower. There we shall find the chimney heads, many of them still perfect. It is worthy of remark that there are no gargoyles, merely holes through which lead pipes would convey the rain water

from the roofs. I notice no corbels or other evidences of any intention to fix around the walls those wooden boards or scaffolds which Viollet-le-Duc tells us were frequently, though possibly only at earlier dates, in use during the times of a siege. Neither, although the lines of the lead flashings can be traced throughout along the top of the walls, can I as yet see the slightest evidence that the buildings here or the towers had those high-pitched roofs which give so striking a character to the restoration effected by Viollet-le-Duc under Napoleon III. of the contemporary Château of Pierrefonds. If, as seems probable—for there was certainly one small flat roof over the sacristy by the chapel—the roofs here were of low pitch and covered with lead, it shows how early the English abandoned the high roofs, which give such a picturesque effect to the châteaux on the Loire and throughout France, and to the castles and peel houses of Scotland, and in fact the domestic architecture generally of those countries as compared with the low and in later times apparently roofless architecture of England. I need not tell you that in the composition of this paper I have been largely indebted to the work of Mark Antony Lower and others who have studied here before me. My object has been to provide that we should, as far as may be, inspect this most interesting building with our minds attuned to understand that which is before us, and we may be glad that, through the instrumentality of those who have made such things their study, we are not now liable to fall into the error of an anonymous bard of the beginning of this century who, writing a poem of six cantos on Bodiam Castle, fixed the events he described some century before its foundations were laid.

## LEGAL.

High Court of Justice.—August 11.

(Before Mr. JUSTICE HAWKINS.)

NICHOLLS v. BAYNHAM.

RESERVES IN CONTRACTS.

This case, which was an interpleader issue, came on for further consideration upon the report of Mr. Harry Jones, the special referee. The claims arose out of a contract undertaken by Messrs. Braid & Co., in April 1881, to build a manor-house at Baldslow, in Sussex, for Mr. C. J. Ebdon. Messrs. Braid & Co. failed in July 1882, before the completion of the work. Under the contract, the architect, Mr. Norman Shaw, was bound to certify for not more than 80 per cent. of the work done, leaving a reserve of 20 per cent. in favour of the building owner. On this reserve a charge had been given by Messrs. Braid & Co. before their liquidation in favour of Mr. Nicholls, the plaintiff in the present issue, and the question was whether Mr. Nicholls was entitled to the benefit of his charge on the payments under the contract as against Mr. Baynham, the trustee of Messrs. Braid & Co., in liquidation. Mr. Baynham had, subsequently to the liquidation, completed the work at a considerable loss, the total expenses exceeding the contract price by some 3,000*l.* The contention of the plaintiff was that at the time of the failure there was a reserve due to Braid & Co. of 1,700*l.*; the defendant, on the other hand, contended that the architect's certificates were inaccurate, and that Braid & Co. had been paid for the whole amount of the work done up to the date of their failure. This was the question referred, and the referee reported shortly that 140*l.* was due to the plaintiff. Counsel for the plaintiff now argued that on the evidence given before the referee there was shown to be a reserve of 1,700*l.*, to which the plaintiff was entitled. The arguments on this point turned on somewhat complicated questions of account; but it was further contended on behalf of Mr. Baynham that, even if a reserve existed at the time of the failure, the trustee, having completed the contract at his own cost, was entitled in equity to all moneys payable under the contract, and also that the charge was given in fraudulent preference of other creditors and for an antecedent debt, instead of for advances for the purposes of the contract, as alleged by the plaintiff.

During the course of the arguments the learned judge made one or two suggestions with the view of promoting an arrangement, but without success until he was rising for the day, when a further conversation took place, which resulted in the matter being left in His Lordship's hands. His Lordship then said that he thought the plaintiff should receive 320*l.*, and a further sum of forty guineas, being half the costs of the referee, out of the fund in court.

Accordingly the case was settled on these terms.

Queen's Bench Division—Divisional Court.

(Before LORD COLERIDGE and Mr. JUSTICE FIELD.)

MEAKIN and MAY v. HARCOURT.

ARBITRATION AWARDS.

In this case the plaintiffs had been employed by the defendant to do repairs at the Clarendon Hotel, Anerley, now known as the Connaught Club, and certain disputes had arisen between them as to the value of such work and repairs, and with a view of settling



the dispute it was agreed that the work should be measured up, and the amount due upon such measurement should be ascertained by two surveyors to be nominated by the parties, and that the measuring-up should be referred to an arbitrator, who was to certify the amount to be paid for the work, the referees and the umpire to make the award within one month from the date. The arbitrators agreed to extend the time to May 9, and made the award on May 8, certifying the amount due to be 320*l.* after giving credit for sums due. The account not being paid an action was brought upon the award.

Counsel for the defendant moved to set aside the award, first, on the ground that the referee had not measured the work himself, but had it done by an experienced and skilled assistant, and, next, on the ground that the award was not made within the time limited, there being, he said, no power to the arbitrator to extend the time, and no such power in the Court under the Common Law Procedure Act or under the Judicature Acts.

The Court came to the conclusion that they had such power, at all events if there was an application to them to extend the time, on which plaintiffs' counsel made the application.

Defendant's counsel objected to an application without notice, and to the Court allowing the time to be enlarged for making the award.

Lord Coleridge said neither of the objections were good. As to the measuring, the measurement was to be ascertained by the referee, and it had been ascertained by him in the usual and accustomed way, and that was sufficient. Then as to the other point as to the time for making the award, the Courts had exercised the power of extending the time in analogous cases. Under the Common Law Procedure Act where no time was mentioned the time should be three months, and it had been held that the Court had power to enlarge that time, and so where there was an agreement between the parties as to an extension and the arbitrators had acted in excess of the power. These cases afforded obvious analogies, and the Court would follow them, and as it was obviously just to extend the time the Court would do so.

Mr. Justice Field said he quite concurred, and thought the case equally clear upon principles of law and justice. The question was one of measure and value, and it was not properly referred to skilled persons, and the measurement was to be done by a particular person as referee. The arbitrators being laymen and not learned in the law, thought they had power to extend the time, and agreed to do so, and the defendant, informed of it, did not object to it, and now, when sued upon the award, he objected to it, and took the objection, also, to the mode of measuring. As to the mode of measurement adopted it was obviously convenient. As to the objection to the extension of the time, it was clear that the Common Law Procedure Acts gave the power of extension.

The Court therefore upheld the award.

#### MARCH v. WINDUS.

##### CONTRACT FORMS.

This was an action on the contract contained in a receipt, dated Manchester, February 12 last, in these terms, written by the defendant and given to the plaintiff, for whom one Cahill was building a house:—"Received from Mr. March 30*l.*, under an agreement made with Cahill on account of the sums due to me in respect of the buildings at Worsley, and in consideration of such payment I undertake at once to proceed with the buildings." He did not do so to the satisfaction of the plaintiff March, who therefore sued him on the contract contained in that receipt. At the trial in the Salford Court it was objected that there was no valid contract with March, the plaintiff, who had contracted with Cahill, the builder. The judge, however, overruled the objection, and the plaintiff obtained a verdict.

The Court upheld the verdict on the grounds that there was a valid contract, but a rule *nisi* was granted on the ground of rejection of evidence.

#### WORKS IN PROGRESS.

**Messrs. John Hall & Sons**, of Bristol and High Street, Marylebone, W., have supplied the whole of the glass and completed the large dome at Madame Tussaud's new building in Marylebone Road. The building has been painted throughout with the special enamel paint supplied by the same firm.

**Hertford Corporation Town Waterworks.**—The "Abyssinian" tube well, for the entire supply of the town of Hertford, has been completed by the contractors, Messrs. Legrand & Sutcliffe, with most satisfactory results. The size of the tube well is 7½ inches; and at 81 feet the chalk springs are so abundant that the yield is over 100 gallons per minute, or about 150,000 gallons per day. The pumping, when necessary, can be continued night and day with a very small amount of attention, as the motor is a powerful water-wheel worked by the river Lea. The contrast between the clear and sparkling from the artesian spring and the turbid water of the river is very marked. This well affords a further illustration of the fact stated by Mr. Robert Sutcliffe at the recent water-supply conference held at the Health Exhibition,

that it frequently happens there is abundance of good water to be found on the banks of a river that is no longer itself fit to supply water for dietetic purposes. The total saving of the expense of filtration is also a very important item, which might, to some extent, recompense the London water companies for the expense of obtaining their supplies from sources that need no outlay on this head. The total cost of the tube well, including cast-iron connections to pump, was under 150*l.*; so that town supplies on this system cannot be considered extravagant.

**Wood Block Flooring.**—Mr. Lowe's system has been just adopted at the Cambridge Free Library; for the whole of the floors at the extension to the Midland Railway Hotel, Derby; the basement and first and second floors in connection with the Nicholson Free Library and Art Museum, Leek; floor of Turnstone Church, Vowchurch; carriage-house, Bradford, Yorks; floor of the Bon Marché, Liverpool; floor of Manchester and County Bank, Stalybridge; floors of lodges for Zoological Gardens, Liverpool; floor of joiner and carpenter's shop at Meltham Mills, near Huddersfield; floor of Chipping Campden Church, Gloucestershire; floors at St. Chrysostom's Church, Rusholme, near Manchester; floor of office for Messrs. Salmons & Sons, Reading; floor of fitting-shop for Messrs. Samuel Marsden & Son, Screw Bolt Works, London Road, Manchester; floor of billiard-room for Mr. J. Wardle, Leek, North Staffs.

#### NEW BUILDINGS.

**Ancoats.**—The foundation-stone of the parsonage which is to be built adjoining the church of St. James the Less, Little Newton Street, Ancoats, Manchester, has been laid. The parsonage is to be erected after the designs of Mr. H. C. Charlwood, architect, and is estimated to cost about 700*l.* The site, however, and the land adjoining, on which it is proposed to erect day and Sunday schools, have entailed an expenditure of 2,000*l.* It was explained that money had already been secured to defray the cost of the land and the expense of building the parsonage; but that the only sum in hand towards the cost of the erection of the schools was 26*l.* The cost of the parsonage-house would be 1,700*l.* altogether, but the site would cost 1,000*l.*, and the site for the schools another 1,000*l.*

**Hammersmith.**—St. John's Mission Hall, a view of which appeared in our issue of December 2, 1882, has just been completed. The building, which is a large and handsome one, of red brick with Bath stone dressings, has been erected from the designs of Mr. Hugh Roumieu Gough, who has adopted late fifteenth century Gothic of decidedly Flemish character for the work. The hall is 109 feet long by 30 feet 9 inches wide, with cloak-room, vestry, and retiring-room, and lobbies at the ends, with a large and well-elevated platform. In the basement accommodation is provided for a workman's club and institute, a kitchen for dinners to the poor and for other purposes, and ample provision for storage. The general contractor for the works, which have been executed at a cost of about 2,300*l.*, was Mr. John Lister, of Aston, near Rotherham, the mason's work being sub-let to Messrs. Tomes & Wimpey, of Hammersmith, and the carving of crockets, finials, and label terminations, &c., to M. B. de Szymanowicz, who has carried out his work with skill and taste. The building is warmed by means of Messrs. Musgrave & Co.'s slow-combustion air-warmers, placed in chambers below the floor-level. Mr. Geo. Linger, of Hammersmith, supplied the whole of the seating, tables, &c.

**Masonic Hall at Bo'ness.**—The foundation-stone was laid on the 8th inst. by the Earl of Mar and Kellie. The building will consist of two storeys. In the upper storey there will be a large hall, 45 feet by 30 feet, with a platform 27 feet by 18 feet, and having accommodation for 350 persons. The entrance to the hall will be from the south-west corner. Besides the hall, there will be on the upper flat committee and ladies' cloak-rooms. On the ground flat there will be a lesser hall, 30 feet by 18 feet, with ante-rooms, reading-room, games-room, billiard-room, lavatory, &c. The two last-mentioned rooms will be in the eastern wing of the building, while in the western there will be the keeper's house and public baths. The buildings are being constructed of white sandstone. Mr. Thomas Beattie, builder; Mr. Alex. McCallum, joiner; and Mr. Thomas Hodge, plumber, are the principal contractors. Mr. William Simpson, of Stirling and Bo'ness, is the architect.

#### CHURCH BUILDING AND RESTORATION.

**Astwood Bank.**—The new church of St. Matthias and St. George has been opened. The church is built from the designs of Mr. W. Jeffery Hopkins, of Worcester, and when completed will consist of chancel, nave, north and south aisles, porch, vestries, and tower. The style is that of the fourteenth century. The portions already erected are the chancel, the outer walls of the vestries, and the foundations and base of the tower. The spaces comprised within the walls of the chancel, the tower, and the vestries have been fitted up with temporary flooring and chairs, and will be used temporarily as a nave. This space accommodates over two



hundred persons. When the church is completed the centre part of this temporary arrangement will form the chancel and sanctuary, the north portion the vestries, and the south portion a part of the lower stage of the future tower. The temporary brick wall on the west side will be removed, and the arch which is already built, and may be seen from the inside, will be the chancel arch connecting the nave and chancel. The walls of the church are built of Bromsgrove stone, the inner walls being faced with brick, having ornamental band work. The contractor is Mr. Henry Surman, of Astwood Bank. The fabric when finished will cost 6,000*l.* or 7,000*l.* The part at present built will cost about 2,200*l.*

**Marylebone.**—The dedication-stone of a new chancel in the parish church has been laid by Mrs. Gladstone. To give space for the new chancel the present vestry will be removed, and from the rails in what is now the body of the church there will be formed a chancel of nearly 50 feet in length, including the depth of the semicircular apse, of which the diameter will be about 30 feet, that being the width between the walls of the wings. The interior will be decorated from designs by the architect, Mr. Thomas Harris. Walls and pilasters will be of richly-coloured marbles, and the bays will be enriched with mosaics and paintings on canvas fixed in the walls. Where the galleries are taken down, the spaces on either side between the windows will be decorated with paintings after designs by Mr. Armitage, R.A. The stained-glass windows will, on opposite sides, represent incidents recorded in the Old and New Testaments, types and antitypes. The subject of the reredos will be the Crucifixion, and in the four bays, two on each side, the lights will be filled in with representations of the Annunciation and the Transfiguration, Resurrection and Ascension. The mosaics will be the work of Messrs. Burke and Salviati. Mr. Conder is the builder. The cost of the new chancel is estimated at between 11,000*l.* and 12,000*l.*

**York.**—A new Wesleyan chapel, Clarence Street, York, was opened on Wednesday, the 13th. It is in the Italian style, and is built of pressed bricks from Messrs. Williamson's, near Hull, with stone dressings from Bradford; the columns of the portico are of polished grey granite. The interior is fitted up throughout in varnished pitch-pine; the ceiling is divided into panels and enriched with ornament; the organ recess has Corinthian pilasters and enriched entablature; a portion of the windows are of stained glass by Messrs. Winfield (late Camm Bros.), Birmingham. Accommodation is provided for 830 persons including free seats; there are also four large vestries or class-rooms. The total cost of the building, exclusive of boundary walls, has been about 3,000*l.* The contractors are:—Mr. Swallow for stone and brick work, Messrs. Bellerby for painting, Messrs. Walker for heating, all of York; the joiner's work has been executed by Mr. Deacon, of Shipley; the plasterer's work by Mr. Dixon, of Bradford; the plumber's work by Mr. G. Thompson, and the slater's work by Messrs. Pycok, both of Leeds; the gas-fittings and railings have been supplied by Messrs. Freeman & Collier, of Manchester; the ventilation by Hill & Hey, of Halifax; and the carving by Mr. R. Boys, of Leeds. The architect is Mr. W. J. Morley (now Morley & Woodhouse), of Bradford and Bolton.

### SCHOOL BUILDINGS.

**Kettering.**—Sunday-schools erected for Toller Chapel have been opened. The schools are built on the model of the American schools, and by arrangement of sliding shutters, the space surrounding the main building can either be shut off and converted into separate class-rooms, or the whole can be thrown into the large room. The total length of the large room is 60 feet, and the width 48 feet. It is covered with an open-timbered roof, stained and varnished, and when the class-rooms—which are lighted from windows in the external walls—are shut off, the central part of the room is lighted by clerestory windows and by a large ornamental window in the south-west end. The room is approached by means of two commodious staircases carried up in towers, the treads of the stairs being of Hayward's patent oak cubes, the remainder of the woodwork being pitch pine. Folding doors give access to the staircases, and these are arranged to open outwards for avoiding risk of danger in case of panic. The ground floor is occupied by a large infant schoolroom, in which is a gallery capable of seating 120 children. The floor of this room is of patent wood blocks laid solid. Beyond this is a corridor, from which branch off other corridors, leading to a series of other class-rooms of various sizes, the centre space also being available for small meetings. Mr. E. Barlow, of Rothwell, was the contractor. The sliding shutters were by Mr. Stone, of Ulverstone; the heating apparatus by Mr. Marriott, of Higham Ferrers; the cast-iron work by Messrs. Wright & Co., of Leicester; and the wrought-iron fencing and gates by Mr. Anderson, of Kettering; Mr. R. W. Johnson, of Melton Mowbray and Kettering, being the architect.

**Yeadon.**—School buildings for boys, girls, and infants have been opened. The building has been erected from the designs of Mr. W. J. Morley, architect (now Morley & Woodhouse, Bradford and Bolton). Accommodation has been provided for 1,070 children. The departments for the boys and girls are placed at either

end, while provision is made for the infants in the centre. The department for boys consists of two large rooms 53 feet and 75 feet long respectively, with a width of 20 feet in each, the height of the lock-couple ceiling being also 20 feet. That portion of the building devoted to the girls is similarly arranged, and each school has four large class-rooms opening out of the larger apartments. The total cost is a trifle under 5,000*l.*, and this sum includes the expenses for lighting and heating, and the boundary walls, which latter, on account of the nature of the site, has been an expensive item. Mr. Kenyon, of Yeadon, acted as clerk of works. The contractors were Messrs. Hargreaves, masons, Rawdon; Messrs. Taylor, joiners, Yeadon; Mr. Lumb, plumber, Yeadon; Mr. Edwards, painter, Rawdon; Messrs. Wheeler, plasterers, Calverley; and Mr. Stoner, slater, Bradford; while Messrs. Green & Co., of Leeds, have supplied the heating apparatus.

### GENERAL.

The Government have refused the offer of the Fountaine selection made by the syndicate, on the plea that the British Museum and the South Kensington Museum have ample funds for the purchase.

An Exhibition of Paintings, Decorative Art, &c., will be held in Eastbourne from September 4 to 13.

M. Ferdinand Gaillard, the French engraver, is now in London examining the various studies executed by Leonardo da Vinci for his painting of *The Last Supper*.

Mr. R. Winn, M.P., has contributed 580*l.* towards the restoration of the old Norman church of Thornton Curtis, Lincolnshire.

Mr. Ruskin will deliver a further course of professional lectures at Oxford in the October term. The lectures will, it is expected, resemble those which he gave seven years ago, in the last year of his first tenure of the Slade Professorship, and will consist of readings from his former works, with elucidatory notes and comments.

Mr. Darby, architect, has prepared plans for additional work-house accommodation at Cheltenham.

The Biological Institute of Great Britain have decided to erect their first Laboratory and Marine Museum on the Hoe at Plymouth, at a cost of 10,000*l.*

The Royal Archæological Institute will meet next year in Derby.

Messrs. Oldham, Chambers & Willins, architects, of Norwich, have dissolved partnership.

The London School Board have expended 139,023*l.* for the purchase of land for schools, and 136,803*l.* for the erection or alteration of buildings during the past year.

Mr. Charles Barry has proposed to the Metropolitan Board of Works, on behalf of the governors of Dulwich College, that a part of the College estate should be set aside as an open space for the public for ever.

The new Parish Church of Glendinnes, Banffshire, was on Monday struck by lightning and set on fire. The belfry was completely consumed, and the roof was much damaged before the flames could be extinguished. When its fastenings gave way the bell fell into the church, smashing many seats and some woodwork in the interior.

Blackfriars Bridge was on Monday partially closed for the purpose of being repaved. During the execution of the work three lines of traffic will be kept open, and will be regulated as usual by the police.

A General Inquiry is to be made into the drainage of the Lower Thames Valley. At present the inhabitants are liable to pay large penalties to the Conservators of the Thames.

Sir Henry A. Hunt has made his award in the case between the North-Eastern Railway Company and the owners of the Nail Works in Westgate Road, Newcastle. The premises are required for the railway, and a sum of 13,000*l.* was claimed for them. The award is 7,535*l.*

Count Saburoff, the late Russian Ambassador at the Court of Berlin, has sold his unique and valuable collections of classical antiquities. It is stated that the Eremitage of St. Petersburg has paid for the terra-cotta collection, 644,000 marks; the Berlin Museum, for forty-nine vases and sixty pieces of sculpture, 300,000 marks; and the British Museum, for the bronzes and other objects, 805,000 marks.

The Derby Town Council have received fifty-four sets of designs for their proposed new asylum. At the quarterly meeting of the council held last week, one of the councillors raised the question of the appointment of a professional referee, contending that if such a functionary were appointed the committee would have had plans from more experienced architects. He further alleged that the authorship of some of the designs was not a secret, a statement which several members of the committee denied; and as the subject dropped the mayor remarked that the Lunacy Commissioners would have to be satisfied upon any plan selected by the committee.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, AUGUST 16, 1884.

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### COMPETITIONS OPEN.

**NORTH SHIELDS.**—Aug. 18.—Plans are required for Alterations and Additions to the Workhouse. Mr. Christopher Scott, Guardians' Hall, North Shields.

**STOCKPORT.**—Oct. 1.—Designs are invited for Public Baths. Premiums of £50, £30, and £20. Mr. Walter Hyde, Town Clerk, Stockport.

### CONTRACTS OPEN.

**BASFORD.**—Aug. 18.—For Additions to the Workhouse. Mr. H. Walker, Architect, Newcastle Chambers, Nottingham.

**BATLEY.**—Aug. 16.—For Building Dwelling-house. Mr. J. T. Law, Architect, 64 Commercial Street, Batley.

**BELFAST.**—Aug. 18.—For Building School-house to Baptist Church. Mr. William Hastings, 20 Victoria Street, Belfast.

**BELFAST.**—Aug. 19.—For Building Surgeons' Apartments at the Workhouse Infirmary. Messrs Young & Mackenzie, Architects, Donegall Square East, Belfast.

**BELFAST.**—Aug. 22.—For Building Aisles and Gallery to Drew Memorial Church. Mr. Wm. Batt, jun., Garfield Chambers, Royal Avenue, Belfast.

**BIRMINGHAM.**—Aug. 28.—For Erection of Kitchen and other Buildings at the Workhouse. Mr. W. H. Ward, Architect, Paradise Street, Birmingham.

**BOURNEMOUTH.**—Aug. 16.—For Building Sanitary Hospital at the Workhouse. Mr. G. R. Andrews, Surveyor, Town Hall Chambers, Bournemouth.

**BRIGHOUSE.**—Aug. 22.—For Building Warehouse. Messrs. G. Hepworth & Son, Architects, Brighouse.

**BRISTOL.**—Aug. 19.—For Rebuilding Avon Packet Tavern. Mr. H. Williams, Architect, 28 Clare Street, Bristol.

**CHEPSTOW.**—Aug. 20.—For Building Petty Sessional Court. The County Surveyor, 2 Bridge Street, Newport, Mon.

**COLCHESTER.**—Aug. 18.—For Building Villa. Mr. J. W. Start, Architect, Head Street, Colchester.

**CORK.**—Aug. 18.—For Building Twenty Houses. Mr. Robert Walker, Architect, 17 South Mall, Cork.

**CORNWALL.**—Sept. 2.—For Erection of Viaduct in Masonry at Guildford, Hayle, and at Redruth. The Engineer, Paddington Station.

**DAREMTH.**—Aug. 25.—For Enlargement of Gasworks at the Asylum for Imbeciles. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

**DORKING.**—Aug. 18.—For Carrying-out System of Sewerage. Messrs. Smith & Austin, C.E., Hertford.

**DRIGHLINGTON.**—Aug. 16.—For Additions to Board Schools. Messrs. W. & R. Mawson, Architects, Exchange Buildings, Bradford.

**EAST COWES.**—Aug. 22.—For Construction of Sea Wall at Coast Guard Station. The Director of Works Department, Admiralty, 71 Spring Gardens, S.W.

**FLEETWOOD.**—For Building Business Premises. Mr. C. Pearson Shaw, Architect, 37 St. Peter's Place, Fleetwood.

**GRAYS THURLOCK.**—Aug. 19.—For Building Mistress's Residence and Additions to Board Schools. Mr. E. C. Allam, Architect, Romford.

**HAIFAX.**—Aug. 16.—For Rebuilding Excelsior Works. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

**HOLME CULTRAM.**—Aug. 21.—For Repairing the Abbey Church. Mr. John A. Cory, Architect, The Courts, Carlisle.

**LETTERKENNY.**—Sept. 1.—For Additions to District Lunatic Asylum. Mr. Morley, Building Surveyor, Commercial Buildings, Dublin.

**LLANISHIER.**—Aug. 22.—For Construction of Storage Reservoir, &c. Mr. J. A. B. Williams, Engineer, Queen's Chambers, Queen Street, Cardiff.

**LOCHMADDY.**—Aug. 30.—For Additions to Hotel. Messrs. Kinnear & Peddie, Architects, 3 St. Charlotte Street, Edinburgh.

**LONGTON.**—Aug. 20.—For Building Relief, Vaccination, and other Offices. Mr. E. Scrivener, Architect, Howard Place, Hanley.

**LOW SEATON.**—Aug. 23.—For Building Good Templars' Hall. Mr. G. D. Oliver, Architect, 44 Pow Street, Worthington.

**LUCTON.**—Aug. 19.—For Additions to Foundation School. Mr. F. R. Kempson, Architect, Hereford.

**MULLINGAR.**—Aug. 20.—For Building Post-Office. Office of Works, Dublin.

**NELSON.**—Aug. 26.—For Building Weaving Shed and Premises. Mr. Thomas Bell, Architect, 14 Grimshawe Street, Burnley.

**NETHERTON.**—Aug. 16.—For Foundations of All Saints' Church. Mr. C. J. Ferguson, Architect, 50 English Street, Carlisle, and 15 Dean's Yard, Westminster.

**NOTTINGHAM.**—For Building Public-house and Four Houses with Sale Shops, Hyson Green. Mr. Herbert Walker, Architect, Newcastle Chambers, Nottingham.

**OLDHAM.**—For Building Fireproof Mill. Mr. Joseph Stott, Architect, 26 Clegg Street, Oldham.

**OVERTON.**—Aug. 20.—For Building Police Court and Alterations to Police Station. Mr. T. M. Lockwood, Architect, 80 Foregate Street, Chester.

**PADIHAM.**—Aug. 20.—For Construction of Reservoir with Water Tower, &c. Messrs. Garlick & Sykes, C.E., 33 Winkley Square, Preston.

**PETERBOROUGH.**—Aug. 19.—For Building Dwelling-house, Westgate. Mr. James Ruddle, North Street, Peterborough.

**PRESTON.**—Aug. 20.—For Construction of Dock, Tidal Basin, Locks, Diversion of River, &c. Mr. E. Garlick, C.E., 33 Winkley Square, Preston.

**SKAITH.**—Aug. 25.—For Strengthening Roof and other Work at Wesleyan Chapel. Mr. W. Watson, Architect, Barstow Square, Wakefield.

**SUNDERLAND.**—Aug. 19.—For Building Six Cottages. Mr. W. Milburn, jun., Architect, Fawcett Street, Sunderland.

**TODMORDEN.**—Sept. 23.—For Construction of Reservoir, Ramsden Clough. Mr. James Farrar, C.E., Market Street, Bury.

**VAUXHALL.**—Aug. 20.—For Building a 40-quarter Brewery. Messrs. H. Stopes & Co., Architects, 24A Southwark Street, S.E.

**WALLINGFORD.**—Aug. 19.—For Building Water Tower, Cottage, &c. Mr. C. Hedges, Town Clerk, Wallingford.

**WALSALL.**—Aug. 23.—For Erection of Farm Buildings, Brockhurst Farm, for the Corporation. Mr. Samuel Wilkinson, Architect, Town Clerk, Bridge Street, Walsall.

**WILSDEN.**—Aug. 25.—For Building Mill, Shed, Offices, Engine and Boiler Houses, Chimney, &c. Mr. Wilson Bailey, Architect, 9 Market Street, Bradford.

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

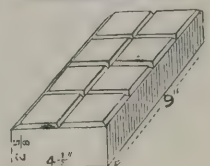
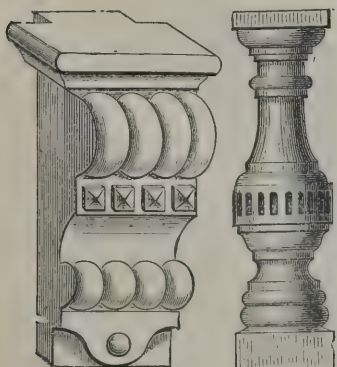
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Made from the Finest Terra-cotta and Stoneware Clays, of a warm and pleasing appearance, of beautiful and superior quality and finish, non-absorbent, acid, fire, and alkali proof, will resist the most severe frosts, and when tested were found to withstand a pressure of 445 tons to the square foot. They have been used in the most exposed parts on the North and South Coasts, and being true Terra-cotta, are warranted imperishable.

Pattern Sheets and Price Lists of superior Glazed Stoneware Sanitary Pipes, and Fire Clay Goods, Chimney Tops, &c., on application.

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WIMBLEDON.—Aug. 26.—For Building Press House, Cake Shed, and Plant for Treatment of Sewage Sludge. Mr. W. H. Whitfield, Local Board Officer, Broadway, Wimbledon.

WINSFORD.—For Building Chapel. Mr. Herbert Isitt, Architect, Queen Anne Chambers, Bradford.

YORK.—Aug. 18.—For Restoration of St. Crux Church. Messrs. Fisher & Hepper, Architects, 16 Castlegate, York.

## TENDERS.

## ACTON.

For the Erection of Two Detached Villas on the Cumberland Park Estate, Acton, for Mr. C. F. Allison. Mr. ALFRED WRIGHT, Architect, Belgrave House, 190A Brompton Road.  
BRAY (accepted) . . . . . £1,000 0 0

## ADDISCOMBE.

For Building Primitive Methodist Chapel and Lecture Hall at Addiscombe, Croydon. Mr. JAMES WEIR, Architect, 9 Victoria Chambers, Westminster, S.W. Quantities supplied by Mr. C. G. Maylard.

Shapcott . . . . .	£1,398 0 0
Homewood . . . . .	1,380 0 0
Hobbs & Son . . . . .	1,270 0 0
Humphreys . . . . .	1,250 0 0
Marriage . . . . .	1,170 0 0
HOLLOWAY * . . . .	1,120 0 0

Warming.

Shapcott . . . . .	50 0 0
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\* Amended and accepted, at £1,096.

## ASHBY.

For Building Primitive Methodist Chapel, Ashby, Brigg. Mr. WHITEHEAD, Architect, Bradford.  
Wood, Iron, Painting, Glazing, &c.  
Scunthorpe, Brigg . . . . . £410 0 0  
Brick, Stone, and Slate.  
Kinsley, Ashby . . . . . 400 0 0

## ASTON.

For Building Infectious Diseases Hospital, with Administrative and other Buildings, at Upper Wotton, near Birmingham Cemetery, for the Aston Local Board. Mr. W. A. DAVIS, Surveyor.

	A	B
Smith, Aston . . . . .	£5,883	£4,684
Briley, Birmingham . . . . .	5,850	4,480
Horsmann & Co., Wolverhampton . . . . .	5,694	4,295
Horsley Bros., Birmingham . . . . .	5,550	4,379
Elvins, Birmingham . . . . .	5,358	4,099
Gowing & Ingram, Birmingham . . . . .	5,330	3,999
Bloore, Aston . . . . .	5,273	4,000
Taylor, Birmingham . . . . .	5,230	3,977
Rowbotham, Birmingham . . . . .	5,197	3,944
BARKER & SON, Handsworth . . . . .	5,087	*3,847
Surveyor's estimate . . . . .	5,000	3,650

\* Alternative tender accepted.

A. Tenders for the whole.  
B. Alternative tenders, with the omission of one of the pavilions and outbuildings.

## BELFAST.

For Heating Presbyterian Church, Belfast; St. George's Church, Cultercoats; and Cairn Castle Presbyterian Church, Larne, on the Small-Tube High-pressure System; St. Mark's, Armagh, and Cumber Presbyterian Church, Londonderry, on the Large-Pipe Low-pressure System.

MUSGRAVE & CO., Limited (accepted).

## BRISTOL.

For Additions to St. Jude's Church, Bristol. Mr. E. HENRY EDWARDS, Architect, 5 Clare Street, Bristol. Quantities not supplied.

King & Son . . . . .	£233 0 0
Rowell . . . . .	207 13 6
Veals . . . . .	196 0 0
J. E. Davis . . . . .	184 0 0
Lovell & Sons . . . . .	180 0 0
Brook & Bruce . . . . .	178 0 0
Young . . . . .	177 10 0
Church . . . . .	170 0 0
Pugsley . . . . .	165 0 0
Hill . . . . .	155 0 0
DALTRY (accepted) . . . . .	150 0 0
Bastow . . . . .	149 6 0
Griffiths . . . . .	136 0 0
C. & F. Broadbear . . . . .	129 0 0
Arnum . . . . .	125 0 0
J. Davis . . . . .	101 0 0
Biles . . . . .	45 0 0

## CARDIFF.

For Additions to Infectious Wards at the Workhouse, Soft Water Tank, &c., Cardiff. Messrs. JAMES SEWARD & THOMAS, Architects. Quantities by the Architects.

Davies . . . . .	£118 0 0
Bird . . . . .	1174 0 0
Shepton . . . . .	1126 0 0
Symonds . . . . .	1100 0 0
Lock . . . . .	1088 0 0
JONES BROS. (accepted) . . . . .	1,062 0 0

## CLONMEL.

For Restoration of the Abbey Church of St. Francis, Clonmel, County Tipperary. Mr. WALTER G. DOOLIN, M.A., Architect, 21 Ely Place Dublin. Quantities by Mr. Henry McConnell, Great Brunswick Street, Dublin.

Newstead, Fermoy, County Cork . . . . .	£5,924 4 6
Nolan, Johnstown, Waterford . . . . .	5,920 0 0
DELANEY, Great George's Street, Cork (accepted) . . . . .	5,000 0 0

## BUCKFASTLEIGH.

For the Erection of the First Portion of the Monastic Buildings of Buckfast Abbey, Buckfastleigh, Devon, for the Right Hon. the Lord Clifford of Chudleigh. Mr. FREDERICK A. WATERS, A.R.I.B.A., Architect, 4 Great Queen Street, Westminster, S.W. Quantities supplied by Mr. W. H. Brayshaw.

Wakeham . . . . .	£4,334 18 0
Lethbridge . . . . .	4,244 7 8
Moass & Son . . . . .	3,890 0 0
Luscombe & Son . . . . .	3,804 0 0
Dart . . . . .	3,750 0 0
Gibbard . . . . .	3,697 0 0
Cowlin . . . . .	3,690 0 0
Stephens . . . . .	3,546 0 0

## CORK.

For Erection of Church, Cork District Lunatic Asylum. Mr. WILLIAM H. HILL, Architect.

Hill . . . . .	£1,682 0 0
Delany . . . . .	1,591 0 0
McMULLEN (accepted) . . . . .	1,155 0 0

Roofing over space in same Asylum to form Laundry.

Hill . . . . .	£240 0 0
McMULLEN (accepted) . . . . .	214 0 0

## DROYLSDEN.

For Building Nine Cottages and a Branch Store, for the Droysden Co-operative Society. Mr. P. SMITH, Architect, Bridgewater Chambers, Brown Street, Manchester. Quantities by the Architect.

Bates, Manchester . . . . .	£2,514 0 0
Fielding, Droysden . . . . .	2,496 0 0
Hurst, Droysden . . . . .	2,376 0 0
Eners, Droysden . . . . .	2,360 10 0
Rome, Manchester . . . . .	2,332 0 0
Clayton, Denton . . . . .	2,310 0 0
Warrington, Hyde . . . . .	2,304 0 0
Harrop, Openshaw . . . . .	2,280 0 0
Shaw, Manchester . . . . .	2,275 0 0
Chadwick, Clayton . . . . .	2,241 0 0
Robinson, Manchester . . . . .	2,200 0 0
Shaw & Cuzner, Stalybridge . . . . .	2,193 0 0
Small & Thompson, Manchester . . . . .	2,180 0 0
Hoyland, Manchester . . . . .	2,147 0 0
Macfarlane, Manchester . . . . .	2,130 0 0
Sandham & Thompson, Droysden . . . . .	2,100 0 0
Burgess & Galt, Manchester . . . . .	2,000 0 0
E. & C. JACKSON, Higher Openshaw (accepted) . . . . .	1,985 2 0

## EXETER.

For Pulling Down and Rebuilding a Portion of the Business Premises, 285 High Street, Exeter, for Mr. E. Knapman. Messrs. PACKHAM & CROOTE, Architects, 93 Paris Street, Exeter.

Goss, Ellacombe, Torquay . . . . .	£1,335 0 0
Still, Exeter . . . . .	1,229 0 0
Stephens & Bastow, Bristol . . . . .	1,175 0 0
Stephens, Exeter . . . . .	1,083 10 0
Scadding & Son, Exeter . . . . .	1,000 0 0
Gibson, Exeter . . . . .	870 0 0
GOODING, St. Thomas (accepted) . . . . .	829 3 2

## HECKMONDWIKE.

For Erection of Branch Store and Manager's House, Brighton Street, for the Heckmondwike Co-operative Society. Mr. SAMUEL WOOD, Architect. Quantities by the Architect.

Preston, mason . . . . .	£359 0 0
Ledgar, joiner . . . . .	243 11 0
Shorndon, slater . . . . .	49 18 0
Brook, plumber . . . . .	35 16 0
Porker, plasterer . . . . .	16 0 0

Total . . . . . £709 5 0

## HULL.

For Building Flour Mills, Hull. Mr. ALFRED GELDER, Architect, Hall. Quantities by the Architect.

W. & J. Hall . . . . .	£9,910 0 0
Stanley . . . . .	7,950 0 0
Granby . . . . .	7,410 0 0
Blackburn . . . . .	7,273 0 0
Brown . . . . .	7,107 6 0
Harper . . . . .	7,101 0 0
Southern . . . . .	7,073 0 0
Musgrave . . . . .	6,835 0 0
JACKSON & SON (accepted) . . . . .	6,750 0 0

## LONDON.

For Alterations and Additions to No. 6 Victoria Road, Kensington, for Mr. W. Warder. Mr. ALFRED WRIGHT, Architect, Belgrave House, 190A Brompton Road.

LINNEY (accepted) . . . . .	£495 0 0
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For Alterations, Repairs, and Decorations to No. 60 Brompton Square, S.W., for Mr. J. R. Stevens. Mr. ALFRED WRIGHT, Architect, Belgrave House, 190A Brompton Road.

Craske . . . . .	£218 0 0
Jelly . . . . .	168 0 0
Wilkins & Kent . . . . .	163 0 0
JOHNSON (accepted) . . . . .	144 7 0

For making good certain Repairs at Houses known as 1 to 9 Providence Place, Gray's Inn Road, for Mr. Parker. Mr. H. I. NEWTON, Architect.

Read, Brixton . . . . .	£217 0 0
Cook, Kennington . . . . .	171 0 0

For the Erection of part of new Premises at 425 Oxford Street, for Messrs. Thrupp & Mahey. Mr. ARTHUR KINDER and Mr. H. S. LEGG, Architects. Quantities by Mr. Alfred Howard.

Wall Bros. . . . .	£14,977 0 0
Chappell . . . . .	14,919 0 0
Jerrard . . . . .	14,550 0 0
Kirk & Randall . . . . .	14,175 0 0
Holland & Hannen . . . . .	13,810 0 0
Ferry . . . . .	13,763 0 0
Hall & Beddall . . . . .	13,681 0 0
BRASS (accepted) . . . . .	12,973 0 0

## LONDON—continued.

For Painting and other Repairs, Farnival's Inn, E.C., for Mr. H. Peto. Mr. R. GROOM, Architect, 171 Queen Victoria Street, E.C.

Wall . . . . .	£1,417 10 0
Nash . . . . .	1,396 0 0
Goodwin . . . . .	992 19 0
Oldis Brs. . . . .	877 0 0
Gregory & Bence . . . . .	835 7 6
KIRK & RANDALL, Woolwich (accepted) . . . . .	753 7 6

For Road Making and Paving Works in Shorold's Road, Fulham. Mr. A. C. BEAN, Surveyor.

Allred, Kew . . . . .	£412 0 0
Bendon, Hammersmith . . . . .	394 0 0
Rogers & Dickens, Notting Hill . . . . .	390 0 0
Owen & Brown, Fulham . . . . .	385 0 0
Nowell & Robson, Kensington . . . . .	365 0 0
Tomes & Winfrey, Hammersmith . . . . .	346 0 0
Carter, Fulham . . . . .	343 0 0
COAT, Hammersmith (accepted) . . . . .	333 0 0
Surveyor's Estimate . . . . .	430 0 0

For Wrought-iron Galleries for the Guardians of the Poor, St. Leonard's, Shoreditch. Mr. J. WALLACE PRIGGS, C.E., 21 Queen Anne's Gate, S.W.

Macfarlane & Co., Glasgow . . . . .	£1,400 0 0
Srone . . . . .	905 10 0
Turner & Co. . . . .	902 0 0
Jukes, Conislon, Stokes & Co. . . . .	835 0 0
Brunei & Co. . . . .	693 0 0
Gardner & Co. . . . .	692 0 0
ST. PANCAS IRON WORKS CO. (accepted) . . . . .	598 0 0

For Painting and Decorating Externally the several Buildings of the Licensed Victuallers' Asylum, Old Kent Road, consisting of the Chapel, Chaplain's Residence, Board-room, Library, Lodges, and 170 Houses. Mr. W. F. POTTER, Architect. Quantities prepared by Mr. C. R. Griffiths.

Brazier & Son . . . . .	£937 0 0
F. & C. Hersee . . . . .	737 0 0
Cook . . . . .	738 0 0
Walsby . . . . .	680 0 0
Wythe . . . . .	544 19 0
Wells . . . . .	540 10 0
HAYWORTH (accepted) . . . . .	440 0 0

Internal Repair. at the above.

Walsby . . . . .	£185 0 0
F. & C. Hersee . . . . .	180 0 0
Wells . . . . .	145 0 0
Wythe . . . . .	129 0 0
HAYWORTH (accepted) . . . . .	115 0 0

## MAIDENHEAD.

For Erection of New Residence, Maidenhead Thicket, Berks, for Mr. A. Lawrence. Mr. ARTHUR VERNON, Architect, 26 Great George Street, Westminster, and High Wycombe, Bucks.

Snell . . . . .	£3,414 8 0
Lovell . . . . .	3,320 0 0
Martin . . . . .	3,250 0 0
Taylor & Grist . . . . .	3,216 0 0
Cooper & Son . . . . .	3,200 0 0
Hunt . . . . .	3,119 0 0
SILVER, SONS & FILEWOOD (accepted) . . . . .	3,115 0 0

## MEXBOROUGH.

For Construction of Ejector Station, En ine-house, Boiler, &c., in connection with Contract No. 2 of Sewage Scheme, Mexborough. Mr. G. WHITE, Surveyor.

Slawson, Rotherham . . . . .	£1,550 0 0
Green, Rotherham . . . . .	1,456 5 0
Smith, Mexborough . . . . .	1,420 0 0
Ripley, Rotherham . . . . .	1,385 0 0
Hill, Sheffield . . . . .	1,382 0 0
Buier, Son & Wilson, Dewsbury . . . . .	1,319 0 0
Arundal, Swinton . . . . .	1,243 17 0
WORTLEY, Doncaster (accepted) . . . . .	1,217 10 0
Seiles, Rotherham . . . . .	1,003 0 0

## NEWPORT.

For Erection of Additional Buildings to the Marshes Road Board Schools, for the Newport (U.D.) School Board. Messrs. W. G. HABERSHON & FAWCKNER, Architects, Park Square, Newport, Mon.

Moulton & Brownscrobe, Newport . . . . .	£1,619 0 0
Linton, Newport . . . . .	1,610 0 0
Blackburn, Newport . . . . .	1,575 0 0
Sharren, Newport . . . . .	1,559 0 0
Hazell, Newport . . . . .	1,375 0 0
Hilton & Sons, Birmingham . . . . .	1,295 0 0

For Enlargement of the Infirmary, Newport. Messrs. W. G. HABERSHON & FAWCKNER, Architects, Park Square, Newport.

More, Newport . . . . .	£325 0 0
Linton, Newport . . . . .	325 0 0
Martin, Newport . . . . .	318 0 0
Moulton & Brownscrobe, Newport . . . . .	315 0 0
Mills, Newport . . . . .	311 0 0
Blackburn, Newport . . . . .	310 0 0
Hazell, Newport . . . . .	288 0 0

## THORNTON.

For Additions to James Street Schools for the Thornton School Board. Mr. JOHN DRAKE, Architect, Queensbury. Quantities by the Architect.

Accepted Tenders.

Booth & Son, Clayton, mason . . . . .	£188 10 0
Farnell, Ambler Thorn, joiner . . . . .	114 0 0
Hill & Nelson, Bradford, slater . . . . .	46 15 0
Craven, Thornton, plasterer . . . . .	21 10 0
Ingham, Clayton, plumber . . . . .	36 10 4
Varley & Roebuck, Thornton, painter . . . . .	8 0 0

For Additions to Lodge Gate Schools, Denholme, for the Thornton School Board. Mr. JOHN DRAKE, Architect, Queensbury. Quantities by the Architect.

Accepted Tenders.

Firth & Son, Queensbury, mason . . . . .	£155 10 0
Farnell, Ambler Thorn, joiner . . . . .	138 0 0
Hill & Nelson, Bradford, slater . . . . .	46 10 0
Ingham, Clayton, plumber . . . . .	22 0 10
Craven, Thornton, plasterer . . . . .	15 0 0
Varley & Roebuck, Thornton, painter . . . . .	9 1 3



## NORWICH.

For Construction of Foundry Bridge, Norwich. Mr. P. P. MARSHALL, City Engineer.		
<i>Foundation.</i>		
Hobrough, Norwich	£980 18 3	
<i>Brickwork.</i>		
Hawes, Norwich	3,040 0 0	
Lacey, Norwich	2,676 6 9	
<i>Foundation and Brickwork.</i>		
Botterill, London	3,786 0 0	
Cook, Bennett & Thew, Spalding	3,694 0 0	
BLTH, East Dereham Norfolk (accepted)	3,600 0 0	
<i>Ironwork.</i>		
Barnard, Bishop & Barnard, Norwich	2,814 12 0	
The Cleveland Bridge and Engineering Co., Darlington	2,368 18 0	
Jukes, Coulson, Stokes & Co, London	2,346 0 0	
TIDMAN & SONS, Norwich (accepted)	2,053 1 8	
<i>Brickwork and Ironwork.</i>		
Butler, Stanningley, near Leeds	5,451 10 4	
<i>TOTALS</i>		
Horton & Son, Darlaston, South Staffordshire	7,258 3 10	
Barnes, Norwich	6,988 0 0	
Downing & Sons, Norwich	6,927 0 0	
Cooke & Co., Battersea	6,702 0 0	

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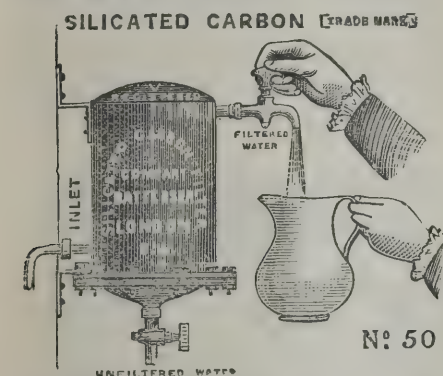
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## NOTTINGHAM.

For Semi-detached Villa Residences, Cavendish Hill, Sherwood, Nottingham. Mr. GILBERT S. DOUGHTY, Architect, Market Place, Nottingham.		
Morrison	£1,530 0 0	
Middleton	1,450 0 0	
Smith	1,418 0 0	
Bell & Son	1,417 0 0	
Cargill	1,390 0 0	
Huskinson & Jeffreys	1,345 0 0	
Cooper	1,334 0 0	
Ireson, Wade & Gray	1,295 0 0	
Brown & Son	1,277 0 0	
ADAMS, late Jelley & Co. (accepted)	1,160 0 0	
Adams, amended estimate	1,200 0 0	

## SWADLINCOTE.

For Extensions to Market Hall Premises, Swadlincote Mr. JAMES NIXON, Architect, Swadlincote.		
Bo-s, Gresley	£334 10 0	
Peace, Swadlincote	327 7 0	
Ward, Swadlincote	309 7 0	
Slater, Swadlincote	308 10 0	
Beard, Swadlincote	304 0 0	
HAIR, Gresley (accepted)	290 6 0	

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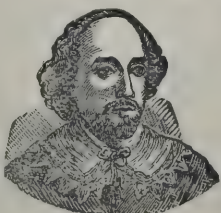
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# The Architect.

## THE COMING RENAISSANCE.



QUESTION which cannot fail to be exercising the minds of a good many enterprising architects just now is one which some others may think to be very easily answered, although it is not—what is Renaissance architecture? It is coming into fashion, or has come in; its demands must be met; the first in the field will have the advantage in its revival; business is business in this as in everything else; it is necessary, therefore, to understand exactly what it is.

The facility—we may almost say felicity—with which English architects of the present day are able to accommodate their hand to a new fashion is a remarkable incident amongst the conditions of artistic practice. The operations which have recently taken place in Queen Anne design—if we may use this commercial phrase to indicate the somewhat peculiar character which the transaction appears to take—have been most creditable to the versatility of English genius. Whatever may be said on the question of artistic stability or loyalty—perhaps it may be called conscience—there can be no doubt that the readiness with which leading men of the business-getting order have played the weather-cock (as hypercriticism may call it) has been phenomenal. But yesterday Gothic was their only wear. To-day it is Queen Anne, and poor Gothic is put away. To-morrow, what is it to be?

Now we are speaking quite seriously when we take credit to English architectural practice for this, and when we repeat once more what we have frequently taken occasion in this journal to say—that it is idle to sneer or even to smile at the present phase of artistic development more than any other. They who are philosophical enough to entertain high hopes of the future of the art in England will see in the present condition of things only another warrant for their expectations. The wider the field which they include in their survey, the more encouragement may they find; but even in the narrowest view of the current architectural mode—as an odd old fashion merely which has been introduced by accidental sketchers of Flemish picturesque for the amusement of a somewhat *blasé* Gothic fancy—the cleverness with which the lesson has been learnt, and, as it were, translated into modern English, is most remarkable. The Gothic schoolmen of thirty years ago were not by any means so successful, even although the unprecedented enthusiasm which took possession of them added enormously to their confidence and vigour. Perhaps the Gothic style which they produced (we are leaving church work, of course, wholly out of account) was less tractable; indeed, we may now say that it was in every way most difficult to deal with—a thoroughly hard-mouthed style. But even in Gothic work (of the municipal or civil order) it cannot be denied by anyone that English designers frequently did themselves the greatest credit, and it may very likely be suggested by many shrewd observers that when in the Queen Anne style the same men and their pupils are now working with such great freedom and effect, it may not be, after all, because they have more easy materials to handle, but rather because they have by former exercise acquired a special dexterity in handling whatever may come: which dexterity, we take leave to add, is the quality whereby, if we are right in our impressions of the case, the next phase of English architectural art is to be particularly benefited.

In other words, the faculty of utilising an antiquated artistic mode by taking it in a spirit of its own and adapting it to modern purposes, without any very material compromise of its idiosyncrasy, seems to be peculiarly an English faculty. The work which is done on this principle may be called copying if the term be insisted upon; but it has now become copying with a peculiar merit which involves so much in the way of original artistic adaptation that it is a different kind of copying altogether from that literal simulation which produced the best examples of the neo-Greek of Munich or the Palladian Italian of Europe at large, to say nothing of the modern Gothic of the High Church in England.

The way in which our brilliant neighbours in France exercise the faculty of imitating antiquated or exotic styles of art is well known; and it is entirely different from this English practice. A trained Frenchman will accept with the most perfect equanimity any mode one chooses to dictate to him, from ancient Egyptian to modern Chinese, or Russian to Irish, and, promptly translating it into the language of the Palais Royal, will express himself with the utmost confidence and courage, producing the most clever things in the world (in their way) with a finesse of which it is needless to say another word. But, however smart and pretty all this artistic fluency may be, and however truly meritorious in these respects, it is plain that the term imitation must be applied to it in quite another sense from that in which we use the phrase with reference to English work; and when, on the other hand, we see such a man as VIOLETT LE DUC, in full panoply of archæological lore, professing to reproduce Mediævalism with an authenticity that is not allowed to be questioned, the result is as hard and mathematical as, like the original, it ought to be fanciful and unrestrained. The fact that nicety may be altogether too nice is here palpably proved; and, at any rate, whatever advantage French art may otherwise derive from this daintiness in such work as emanates from the genuine impulse of the moment, the peculiar merit of being able to enter fully into the spirit of historical character we may claim, let us say plainly, for England alone.

In this view of the matter, then, what course are English architects to pursue in the revival (for we must so call it) of Italian art, which is now supposed to be imminent? We speak here of revival advisedly, as if it were the only process by which the eventuality of a change of architectural fashion in these days is to be accomplished; and the foregoing reflections sufficiently explain the reason why, if only as regards England. Our present Queen Anne work no one imagines to be anything like a permanent style. If everything in this world is in transition at the best, *a fortiori* is such a mode as this a transitory manifestation, leading to some more academical act of development beyond; and it appears to be now pretty generally accepted that the only legitimate outcome of the transition must be "Renaissance." What, then, is this Renaissance to be?

A few years ago, when the change in prospect was beginning to be talked about, it was quite a characteristic circumstance that speculation should turn upon the idea that it would be a matter of choice for leaders of change to determine what "period" of Renaissance ought to be experimented upon for their selection, and Gothic doctrinaires were prompt enough in proclaiming that "early" Italian alone was admissible. This obviously meant no more than that the current revival of the authenticities of Gothic art should be carried forward on new ground to another century, taking care, however, that the reform should stop short of the point of actual revolution. The term "Renaissance" was therefore made to include the transitional twilight which in Italy preceded the eventual birth of day; and no doubt this was perfectly allowable in the language of revivalism. But the mistake still remained which is always involved in the notion that even revival can be made a question of individual choice out of the books; a mistake which is proved by any number of clever examples, from HORACE WALPOLE'S villa and the Brighton Pavilion to PRINCE NAPOLEON'S Pompeian house and the Natural History Museum at South Kensington. So also at the present moment, granting to the utmost all that attaches to the principle which seems to constitute Englishmen the great masters of revival in its best form, we do not think the coming revival of a Renaissance style in England is to be directed or even controlled by the force of will of any individual leader of the profession. Holding, for instance, as we do, that even such a minor manifestation as the Queen Anne fashion is not to be identified with personal leadership, but only with a general movement of public opinion, much more must we look forward in respect of the more academical outcome of it for which every one is waiting, to some manifestation, probably of leisurely growth, which shall involve a development of the universal taste of the country. Perhaps the nearest approach to a direct act of personal artistic influence in the architecture of modern England is to be seen in BARRY'S club-houses; but we can only observe at present that this may after all be quoted, perhaps, as an exception which proves the rule.

It is most likely, therefore, that the Renaissance whose introduction is now in progress in England will not turn out to



be any pure reproduction of the historical style of the Italians. Perhaps we may presently see the mode of some individual master or some particular school working its way to the front; indeed this form of development is probably the only course to which precedent points; but if we are right in our estimate of the *forte* of English architects, the authenticity of it will be only accepted in principle in order to be translated into a language of their own. Absolute originality is out of the question; literal copyism is not to be apprehended; the motive examples of the coming style are not yet to be guessed at; they and their representative man will appear together.

## ANTIUM.

[BY A CORRESPONDENT.]

WITH the thermometer registering upwards of 90 degs. Fahrenheit in the shade—it has reached 97 degs.—it is no wonder that the Romans should betake themselves to their various bathing establishments and seaside resorts. Of the latter, there is not a great choice within easy reach of Rome. Palo, Civita Vecchia, and Porto d'Anzio are the principal, indeed almost the only seaside places eligible for a day's run and a dip into the sea. Neither of the former are great favourites, but the last-mentioned is quickly establishing itself in popular estimation, and certainly deserves the distinction.

Those who visited Porto d'Anzio fifteen or twenty years ago will remember it as no more than a remote seaside hamlet, chiefly built on the quay, a resort of Neapolitan fishermen and of quail-shooters in the season of that migratory bird. From this little port a sweep of sand and a sparsely frequented road led to the nearest town, Nettuno, two miles distant. Almost the only house between the two places was the country villa of the BORGHESI, which rose above the wooded upland that skirted the bay. The spot was at that time so desolate, so little connected with the outward world, so breathing of the departed grandeur of a vanished civilisation, that it appeared to be pervaded with a spirit of intense melancholy; and even now in the winter time, when the sky is clouded over and the shore is beaten with "the melancholy wash of endless waves," it seems as if it was not able to shake off traces of the old mourning, of the centuries of oblivion and gloom, which have so long enshrouded it.

But now it is suffering a change. Direct railway communication with Rome has brought its thirty-six miles' distance within an easy journey, instead of the discomfort of the lumbering diligence and circuitous route by which it was formerly reached. Bathing establishments—the slight variations of tide in the Mediterranean rendering the movable caravan unnecessary—grow by the waterside. Villas rise on every hand, hotels, and lodging-houses. Porto d'Anzio, undoubtedly, will soon be the Brighton of Rome. The young lady can here show the "last thing" in figured skirts, and the "masher" exercise his fascinations. It must, however, be fairly confessed, to the credit of the Italian people, that fashionable follies and affectations are less prevalent with them than with us.

Porto d'Anzio, it will be remembered, is the ancient Antium. It lies almost as far to the south of the mouth of the Tiber as Civita Vecchia does to the north of it. It was one of the most ancient cities of Latium, and subsequently became the capital of the Volscian territory. It was taken by the Romans in the fourth century B.C., and thenceforward became a part of the Roman dominions, and one of the most important Roman seaports. The historical circumstances connected with the place are many and interesting. It is associated with the revolt of CORIOLANUS. It was the birthplace of the emperors CALIGULA and NERO, by the latter of whom it was in a great measure rebuilt and beautified. It was the favourite resort of many emperors. AUGUSTUS was here first styled the father of his country—*Pater Patriæ*. CICERO had a villa here, to which he often alludes in his writings. It was the seat of a famous and splendid temple of FORTUNE, the deity whom HORACE addresses in one of his most beautiful odes as presiding over the city:—

O Diva gratum quæ regis Antium.

It had also a celebrated temple of ÆSCULAPIUS: for when, according to the old legend, the god was being brought from Epidaurus to Rome in the shape of a serpent, he here left the vessel to pay a visit to the shrine of his parent, APOLLO. NERO

brought hither a colony of veterans of the Prætorian Guard. He constructed a fine harbour consisting of two moles enclosing a basin about two miles in circumference. The marble of his palaces shone from the headland, and many noble buildings gave importance to the city. Here were found many celebrated marbles, amongst others the *Apollo Belvedere* of the Vatican, and the *Fighting Gladiator* in Naples.

But Antium, like Rome itself, only grew to decrease. The port appears to have retained a degree of importance up to the sixth century, after which it rapidly declined, a decline which had been inaugurated by the establishment of the Byzantine empire. In the eighth century the irruption of the Goths, Longobards, and Saracens completed its ruin. In spite of the attempts since made from time to time to resuscitate some portion of its former splendour, it has been gradually abandoned to the winds and rains of heaven.

But although there is so little of it left, that little to the thoughtful mind, over which an eventful past always exercises a fascination, is well worth exploring. Ruins of the old Latian city still exist in fragments of huge stonework occasionally discernible on the rising ground about the shore, but more of the more recent Roman city are seen in the extensive substructures that flank the sea-shore a little north of the modern town. First of all the fragments of the moles strike the eye here and there, rising from the sea in almost the whole extent of their lines. They were laid upon piers, substantially built of concrete, thus forming arches by which the tide could flow in and out. The whole line of coast is here honeycombed with chambers and recesses, built of concrete *lateritium* and *reticulatum*. What precise purpose these chambers may have served it is impossible to say. In one place an extensive façade of varied structure faces the sea. Emerging from the masonry both on the shore and above it, stout beams or posts appear, which seem even to have survived the more hardy material in some places. They have been built into the solid masonry, and there is nothing left to show that they supported floors or roofs. They are found throughout the whole extent of the ruins, sometimes isolated, sometimes in groups or rows. They are very puzzling as at present seen. The pebbles of the shore, with which indeed it is thickly strewn, are almost entirely composed of fragments of marble and mosaics, materials not native to the district, showing how great must have been the grandeur and magnificence of the vanished city.

Antium has been very imperfectly excavated. There is little doubt that further research would lead to important discoveries, as substructures of buildings are found extending a considerable part of the distance between Porto d'Anzio and Nettuno. A visit to the latter place is interesting, of which some account may be given. It is larger and more compact than the modern Porto d'Anzio, and is almost purely Mediæval in its aspect. It sits, as it were, on the very front of the waves, thus justifying its name, Nettuno (Neptune), a name supposed to have been bestowed upon it from a temple of that god which once stood there. Its early history is not known, but it probably formed a part or suburb of the larger Antium. In the eighth and ninth centuries, the whole district was overrun by Saracenic pirates, who devastated the coast, and, it is supposed, formed a settlement here, traces of which still remain in the physique and character of the inhabitants. It was in the Middle Ages taken possession of by the ORSINI, and was subsequently held by the COLONNA. In the sixteenth century it was sold to the Church with feudal rights and vassals, "as if," as a local chronicler adds, "they had been herds of cattle." Indeed, one cannot help dwelling for a moment on the condition of these vassals or tenants of those times, who appear only to have been allowed to live simply and solely to furnish plunder to their oppressors. They were not able, excepting under severe penalties, to sell or buy, or even to eat and drink under any other circumstances than those prescribed by their feudal proprietors. They had to fight their battles and furnish their houses. It mattered little to them who gained the continually-recurring contests. They were sure to suffer in their persons, their property, and their families. Even yet traces remain in Italy of this state of things, which was retained when it had died out from most other parts of Europe, in the indifference of the landlord to the welfare of his tenant, or even to the state of his property, so that the annual subsidies be forthcoming. Even yet, on the estates of some of the noblest families in Rome, the utmost wretchedness and misery prevail without a thought for their amelioration. Nettuno still maintains its Mediæval character not yet touched



by modern alterations. Its principal building is an old fortress of the sixteenth century, seen on entering the town. It is a solid and substantial structure built of stone and brick. It is surrounded by a moat, now drained, which is crossed by a bridge of masonry in place of the vanished drawbridge. It is surmounted by guard-houses and watch-towers, and flanked by a low terrace facing the sea. There is also a crumbling, old castle bearing the arms of the COLONNAS. Mediæval walls surround the town. All these are worn by the weather, corroded by the sea winds, and more or less in a state of picturesque decay. Some old houses present interesting and architectural features, with windows divided by twisted mullions and quaint doorways. Tablets are also let into the walls with devices and mottoes—all wasted under the dissolving hand of time. Some of the nooks and corners offer excellent subjects to the painter, with their play of light and shade and groups of characteristic figures.

Before leaving this interesting spot, I should like to convey to the reader a more vivid picture of its present aspect. For this purpose we will take our place in the centre of the bay on the little pier erected for the lounge of the bathers. In front is the open sea. To the right is the headland, upon which stood a good part of the ancient city. It is now crowned by a modern lighthouse and a Papal villa. Beneath this is the quay and its white houses, from which runs a jetty which forms the modern harbour, such as it is. The little town stretches from the quay inland. Between the sands of the bay and the rising ground, somewhat removed from it, a dusty road runs and the railway. From the wooded uplands beyond the Borghesi mansion arises, with other buildings, mostly in a state of progress. To the left the view is exceedingly fine. A mile away the fortress of Nettuno frowns upon the waves, behind which the white buildings of the town arise, overtopped by the arched façade of the church, an artificial structure elevated above the roof with a campanile beside it. Stretching beyond the town, and seven miles further along the coast is seen a thin strip of land upon which stands the white tower of Astura, a place also of classic memories. Further still the headland of the Circeian promontory rises from the sea like an island, the fabled seat of the enchantress who changed her votaries into animal forms; and furthest away the Volscian hills, vague in atmospheric blue. The scene immediately before us is scarcely less enchanting as the afternoon sun begins to sink. The waves seem interwoven with saffron and purple and blue, as the fishing-boats with white lateen sails bend over the water, dipping their snowy wings into cool shadow. Everything seems bright, animated, vivacious. Let us leave the prospect ere the shades of night descend and blot it from view.

#### SIGNOR DUPRÉ'S THOUGHTS ON ART.\*

ONE of the attractions by which the promoters of the Crystal Palace at Sydenham expected to gain money for the shareholders was the collection of casts of modern sculpture. A good deal of care was taken in the selection. Among the works by which Italy was represented was *The Dead Body of Abel*, by Signor GIOVANNI DUPRÉ, of Florence, of which the following official description was given:—"As a representation from nature this statue has great merit, and it is interesting as the first work of a young Florentine sculptor, whom it raised to deserved reputation. He and his wife almost deprived themselves of food in order to procure the material in which to model it. When exhibited, it was ordered by the Grand Duke, about 1846." An advertisement of this kind ought to have made the fortune of a sculptor, but the truth is that modern Italian work is at a discount, and it is only exceptionally popular works which obtain high prices from English patrons. It is not surprising that Signor DUPRÉ felt a complacency that was pardonable when he saw his statue in such good company at Sydenham, and it was no less natural that he ran the risk of imprisonment by breaking one of the fingers, which had been made by some other sculptor. He only escaped by modelling a substitute on demand and repairing the cast in the presence of the officers. The incident is suggestive and characteristic. Signor DUPRÉ is entitled to be ranked among the leading modern sculptors; his style is marked by its

realism, and the addition of a finger which had the last phalange much too short was in his eyes a sort of sacrilege. The impulsiveness which moved him to break the law at Sydenham has likewise made him publish an autobiography, and it must be admitted that in both cases he was right. His book will hereafter be considered as interesting as BENVENUTO CELLINI'S, and, if fewer adventures are related in its pages, it is because it has been written in the nineteenth instead of in the sixteenth century. Signor DUPRÉ'S aim is to write about himself with impartiality; he never exalts his powers or tries to diminish the reputation of his rivals; and, indeed, if he is ever severe, it is when he is passing a judgment on himself. The book is a picture of a simple, manly artist, who has been inspired throughout his long career by a high ideal of his art, and has worshipped sculpture for its own sake, rather than for the money or the honours which he had derived from it.

GIOVANNI DUPRÉ was born in 1817 in Siena, where his father was a journeyman wood-carver, apparently of no great ability, and therefore badly paid. When the elder DUPRÉ went to Pistoja in search of better employment the boy accompanied him, and on an emergency was found to be more competent than his father to model heads for a showman's puppets. In time he was apprenticed to a firm of wood-carvers, and passed from one master to another in Florence, Siena, and Leghorn. But he was also enabled to study in the public galleries, and was recognised as a skilful youth. His shopmates called him "the poet." His wages were about three pauls a day, out of which he reserved a few sous to buy paper, pencils, and books. But although DUPRÉ could be called a model apprentice he was not without faults. He confesses he was justly caned in the school of art for tricks, and he was once locked up for assaulting a man who insulted him. As a professor he believes that the bodily chastisement of students might be profitably reintroduced into art schools.

DUPRÉ in his nineteenth year married a laundress, and then he resolved to become a sculptor. Every spare moment was given to study, and in 1838 he was able to send a statuette in wood to the exhibition. The subject was *Santa Filomena*, who was represented with one hand on her breast and the other holding a bunch of lilies, with an anchor, the sign of her martyrdom, placed at her foot. It was admired by a Russian, but he insisted on the removal of the lilies, and the statuette was thus transformed into *Hope*. In spite of this success DUPRÉ received little encouragement. He was not considered sufficiently competent to be allowed to work as a hewer of marble in a studio, and a professor who saw him copying spoke of his prospects as hopeless. However another professor advised him to take part in the triennial competition, and he was fortunate to be successful in a sort of way. He received ten votes, his rival four, and eleven of the judges voted for a division of the prize. But so much success was grudged him, and it was alleged that his relief was not the work of his hands, but of a professor's. To convince the sceptics, he attempted a statue of a *Bacchus*. He was incompetent to set up the irons; in a little time the model fell to pieces, and the experiment gave rise to more doubts about his competence.

While DUPRÉ was depressed in mind a new competition was announced which was to be restricted to natives of Siena, the prize being a pension which was to last for ten years. Just as he had prepared for the struggle he was officially informed that the money had been appropriated to a chair in the University. In his rage he destroyed his work, although afterwards he expressed gratification at the result, as the prize might have kept him idle. Next he resolved to undertake a life-size figure of *Abel*. But he was too poor to continue the work, and accordingly DUPRÉ appealed to the Florentines to subscribe forty francs a month for a few months. He did not receive half that sum. When the statue was exhibited it caused great excitement. DUPRÉ'S enemies were, however, ready for an attack upon it; this time the realism and accuracy of the work were turned against the sculptor. The statue was said to be a mere cast from the life, and the model was obliged to assume the position of the figure and submit to measurement in order that the truth of the statement might be tested. But the merits of the work overcame all opposition, and DUPRÉ was able to obtain a commission for it and a companion figure from a Russian grand duchess.

His success henceforth might be considered assured. DUPRÉ was soon afterwards elected a professor in the Florentine Academy, and on visiting Siena he was lionised as a celebrity. A commission was given to him for a statue of

\* "Thoughts on Art and Autobiographical Memoirs of Giovanni Dupré. Translated from the Italian by E. M. Peruzzi. William Blackwood & Sons.



*Giotto* for the Uffizi, and this gave him especial delight, for it was an opportunity for the display of realism. Signor DUPRÉ's book is not only an autobiography, but a collection of thoughts on art which have been suggested by circumstances in his own career. Here is what he says about the relation between naturalism and idealism:—

Some reasonings by my friends, certain articles as well as the compliments and eulogies of my statue of *Innocence*, finally persuaded me that there does exist a *bello ideale* impossible to find in nature, and this beauty should be arrived at by an imitation of the antique, and by the aid of memory. Nothing is more dangerous than this theory. Beauty is scattered over universal nature. The artist born to feel and perceive this beauty (which is the object of art) has his mind and heart always exercised in seeking it out and expressing it. He discerns in nature one or more living forms that in some degree approximate to the type he has in his mind, and the reality of these, by strengthening his ideals, enables him to work the latter properly out. The artist who is without his ideal, and forces himself to find it outside of nature, torturing his memory with what he has seen or studied in the works of others, makes but a cold and conventional work. The animating spark, the heat, the life, does not inform his work, for he is not the father but only the stepfather of his children. To this school belong the imitators, that is, the timid friends of nature. On the other side, but in much greater numbers, and with much greater petulance, are the *naturalists* who despise every kind of idealism, and especially despise it because they have it not. Neither is their heart warmed by strong and sweet affections, nor do they with their eyes or their minds seize, among the multifarious shapes of nature, a type, a movement, or an expression which, assiduously pursued, awakens and fecundates the idea within them. The first ruffian or harlot of the streets, taken by evil chance, suffices for them, and they delight to drag this noble art of ours through filth and ugliness. Each of these extremes I have sought to avoid; but it is none the less true that I was carried a little away by the discoveries and writings of literary men and critics of art on the road that leads to the conventional and academic.

The two principles of idealism and realism were much discussed at that time in Italy. To show the lengths to which the advocates went, it is enough to mention that OVERBECK used to maintain that models and nature were destructive of the artist's idea. The principal quality in the work of art was supposed to be the original conception, and accuracy was said to be an enemy to its expression. On the other hand, the *naturalists* were opposed to beautiful forms, and gave a preference to models that were without grace. In fact on one occasion BARTOLINI, who was the principal professor in Florence, introduced a hunchback as a model into his classes. It is no wonder that with such influences we see so many aberrations in the Italian department of international exhibitions.

Professor DUPRÉ was among the competitors for the Wellington Monument. He says that he hardly remembers his design, but he believes that at the angles of the lower base there were groups which symbolised *Military Science*, *Political Science*, *Temperance*, and *Fortitude*. The four faces were filled in with *alto-relievi*. On a pedestal was the principal group of *Wellington with Victory and Peace*. It is not easy to imagine whether the work was possessed of much merit, but as it was broken to pieces in the passage to London, it appeared under disadvantages. On the occasion of his visit to London DUPRÉ made the acquaintance of Baron MAROCHETTI, who declined to enter into the competition. We are told that the Baron was in the habit of employing men to make his clay models, and as they belonged to different schools it was impossible to insure uniformity of style. He was also an advocate for tinted sculpture. JOHN GIBSON also upheld the principle. His *Venus*, which was exhibited in 1851, was rather delicately coloured; but Signor DUPRÉ says that there was a *Cupid* by GIBSON which had golden hair, blue eyes, wings with tufts of red, green, blue, and orange feathers, and a chiselled and gilt quiver. Among the moderns, PRADIER was the only sculptor who knew how to use colour with discretion.

Honours came fast on Signor DUPRÉ after his return to Italy, and he received many important commissions for public statues. His eminence was recognised when he was elected president of the section of sculpture in the Vienna international exhibition, but, like many other artists, he is sceptical about the advantages of those gatherings. At the present time he holds an enviable position in Italy, and a man with so much goodness of heart deserves all that his country can bestow.

## THE INTERNATIONAL HEALTH EXHIBITION.

SINCE our last report many additions have been made to this exhibition, and it is only within the last few days that several arrivals have been placed in position. These include the exhibits from Siam and many from Japan. The Tartar horses and mares are among the recent arrivals, and are accompanied by natives in their national costumes. Messrs. Warner & Sons, of Cripplegate, have erected one of their noted windmills in the grounds on the left hand side of the south gallery, and the sanitary and insanitary houses that have been so long in hand are at length opened to the public. The late visitors are, therefore, in a better position to view the exhibition in its entirety than were those who saw it at an earlier date. There is no falling off as regards numbers, notwithstanding that London is supposed to be empty; on the contrary, with the exception of Wednesday, the half-crown day, they are rather on the increase, and the cry is "still they come." Excursion trains at low fares from all districts within fifty or sixty miles of London, enabling country cousins to "do" the exhibition in a day, are about commencing, and the probability is that the last days of the exhibition, whenever they may arrive, will see larger numbers within its walls than at any other time. There is probably no country where such a number of cheap toys are to be seen in the streets as in England, although many of them are of foreign manufacture; and the "intelligent foreigner" cannot but be struck as he walks up the Exhibition Road with the number of itinerant vendors of useless productions who are rather importunate in their desires to dispose of their wares. From one penny to sixpence a little museum of curiosities may be purchased, ranging from Bradlaugh's baby, warranted not to cry, which, however, strangely belies its facial expression, to exhibition alligators, albeit of a harmless character, that require to be wound up ere they will move, when they perform gyrations on the pavement to the evident delight of "Young England." Inside and out the attractions are "immense," and although we are said to be a nation of grumblers, certainly the Health Exhibition of 1884 is doing its best to repel the accusation.

The shops in the old London street are now in full working order, and with the attendants and workers dressed in the costumes of the Middle Ages are a great source of attraction. From the point of view most likely to interest the readers of *The Architect*, the wrought-iron worker's, represented by Messrs. Starkie Gardiner & Co., of the Thames Embankment, claims attention. An Englishman of the most ordinary attainments can generally appreciate hammered iron work even of an ordinary character, but when one finds an amount of artistic feeling embodied in the productions, this appreciation gives place almost to enthusiasm. The industry, which has lain dormant for such a length of time, is now fairly resuscitated, and we cannot be surprised at anyone of taste or education preferring many of the articles as here shown, and wrought of this humble metal, in place of the more showy ones manufactured of the more costly kinds. Over the entrance to this Mediaeval workshop is written the legend, "By hammer and hand all arts must stand." This and similar mottoes appears to have been generally adopted by iron workers. We do not know if this sentence has been culled from the arms of any company or guild, but a very similar one is the motto attached to the Smith's Arms of Nottingham, which consists of a chevron and three hammers, ducally crowned, "By hammer and hand all arts do stand" being the accompanying words. The motto is certainly most appropriate, though it may be equally applied to other metal trades. The firm have also recently erected an old smithy in the open space beyond the further end of the street, where some craftsmen are daily to be seen at work.

Mr. Henry Charles Stephens.

STEPHENS'S stains for wood have now a world-wide popularity, and those who are unacquainted with what they are capable of accomplishing may see for themselves at Stand 874 in the east gallery. The effect of these stains on white woods in producing the appearance of mahogany, walnut, satin, rosewood, &c., is well known to many of our readers, and is shown here; but valuable as these stains are for the many purposes to which they may be applied, not forgetting flooring (and we may remark that these chemical productions are stains in the proper acceptance of the term) they are capable of a higher class of artistic work than mere self-colouring. Here we see panelling of a most artistic character, treated entirely by Stephens's stains; as, for instance, a "Sheraton," one of the most difficult classes of ornamentation perhaps to treat in such a manner, as well as "Chippendale" and other designs; in fact, with an artist of skill and taste, there appears to be little that these stains are not capable of accomplishing.

Messrs. Burke & Co.

At Stand 896 in the east central gallery, Messrs. BURKE & CO., 17 Newman Street, W., and Rue St.-Luc, Paris, have a choice set of specimens of mosaic and marble work, the former predominating. The largest, and we may say the principal feature, is a slab of mosaic work, containing a life-size portrait of "Justice." This is a fine production, and has, we understand, been made to order. It



is composed exclusively of natural coloured marbles. The background is a deep-coloured dull yellow, which brings out the drapery of the figure in the best manner. This is of various shades of red, the brightest assimilating somewhat to a dull terra-cotta, and is the principal one in the figure save a neutral-coloured flowing green scarf. It is a decided work of art, and of itself sufficient to maintain the reputation of the firm. There are several slabs or panels, reproductions of old Pompeian and Roman originals, excellently portrayed, and a few specimens of Pompeian pavement in black and white, in a good state of preservation. Many specimens of natural marbles are also exhibited, amongst which we notice a small slab of onyx, with an exquisite sea-green tint running through a portion of it. The dados of marble are rich in colour, and there are two examples of balusters in different coloured marbles of a massive character. Though small as regards size, like many of the exhibits, it is rich as regards its artistic features.

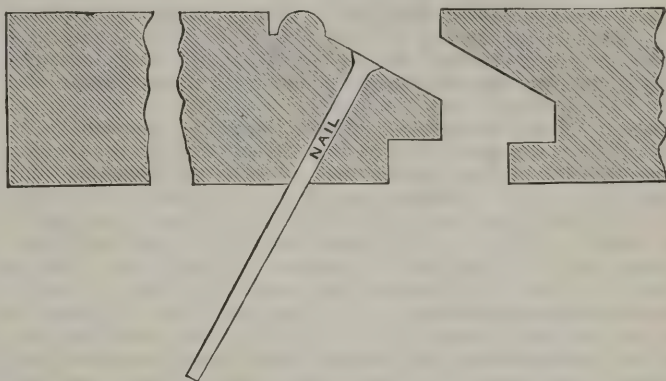
*The United Asbestos Company (Limited).*

The productions of this company, of 161 Queen Victoria Street, E.C., are to be seen at Stand 864 in the East gallery, and are interesting as showing to what important uses this mineral, virtually a stone, has by the aid of science been shown to be capable of adapting itself. Looking at the mineral in its natural state, and then turning our eyes to its many adaptations, we cannot be surprised at the expression of wonder to which some persons give vent on looking at them. From a crude, little understood material, in use a quarter of a century since for fuel for gas stoves and a few other commonplace purposes, it has become a most important material in a variety of ways. It has proved itself to be most valuable as a paint, resisting the encroachments of fire to a great degree, and the whole of the wooden buildings at the exhibition have been painted with it. The asbestos paints are also non-poisonous, and therefore valuable as a sanitary agent. It is also made into millboard of such a thickness that it has become a reliable agent for fireproofing floors and wooden partitions. It in addition has become to be extensively used as a packing for steam joints, piston-rods, &c., and in the form of "washers" is extensively used for machinery. But a great stride was undoubtedly made a year or two since when it was found to be capable of being woven as a fibre, and as a result of this, the company exhibit a complete fireman's suit of asbestos cloth, non-inflammable, while fireproof ropes for fire-escapes and such purposes are now made in any quantities. Another use to which it has been found applicable was discovered by M. Maignen, the inventor of the "Filtre Rapide" (a description of which has appeared in our columns), who, after experimenting upon different kinds of textile materials for the base on which to rely to form the body to which his filtering media should rest, and finding all of them imperfect, tried as a last resource the woven asbestos cloth, which has proved to be the best possible for the purpose.

*Mr. Samuel Putney.*

One of the most recent additions to the exhibition is to be found in a suite of apartments on the left-hand side of the south gallery below the dairies (in which Mr. Taylor Smith's electric lighting apparatus is shown) the flooring of which introduces us to a somewhat novel arrangement for laying boards. This is the invention of Mr. SAMUEL PUTNEY, timber merchant, of Baltic Wharf, Harrow Road, Paddington, and is well worth a close examination. Although it cannot be adopted for the cheaper class of flooring, it is none the less to be commended whenever it can be used, as beyond its novelty it insures a substantial groundwork, as nothing less than one-inch boards can well be used. It is called a "nail-less" floor, and it may really be used without a single one being inserted, but as a matter not altogether of security, but to prevent any "rising" or creaking of the floor, a few here and there may be an advantage. But the nails if used are not visible to the naked eye, as will be seen by our illustrations which show merely the sectional view, as the central one may be

an ornamental flooring of the parquet character, at a much cheaper rate than is now charged. His designs are certainly somewhat restricted, as they must be of the "ribbon" or plain longitudinal character, but with different coloured woods a very pretty effect can be obtained, and this may be diversified by adopting squares or diamonds of a certain size. Mr. Putney has prepared another section besides the one illustrated, with a right-angle shoulder, which is recommended for common floorings, but we have a decided preference for the acute angles. It is maintained that by using Putney's patent boards the shrinkage or buckling so often complained of in parquet floors is avoided, and that they can be taken up and relaid without injury. Mr. Putney has supplied the flooring for Madame Tussaud's new exhibition building in the Marylebone Road, and no better test could be obtained for it. In addition to the flooring, the invention is also adapted for wainscoting or dados, and we subjoin a sectional illustration of the



pattern usually used. Amongst other uses the new flooring will be found of much service for laying down in temporary rooms, or for special purposes in any building, the ease with which they can be laid and taken up, coupled with their attractive appearance, being a great recommendation.

*Messrs. C. Isler & Co.*

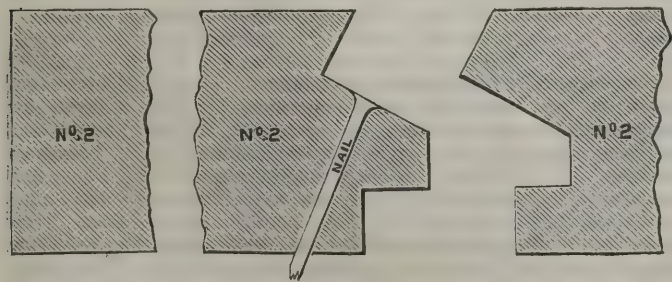
At Stand 460 are appliances without which an exhibition bearing the title of the present one would be anything but complete, seeing they affect the vexed question of pure water supply. Messrs. C. ISLER & Co, 88 Southwark Street, S.E., are the exhibitors, and the exhibit comprises Artesian-bored tube wells and various pumps for raising the water when the well is sunk; also various boring apparatus, such as is used not only for Artesian wells of any depth, but for hydraulic lifts. Amongst the contracts recently completed by this firm was a well for the E. C. Powder Company's New Works at Bean, near Dartford, which yields at the rate of 2,500 gallons of water per hour. A very important feature in favour of Artesian wells is that they are as economical for small supplies as for large, and are as applicable for domestic as they are for public use. The consequence is they are yearly coming into more general favour, and for villages and places where no public waterworks exist, and the inhabitants are dependent for this first necessity of life upon the ordinary well, into which the cesspool too commonly filters, they must be looked upon as an undoubted boon. To exemplify this, Messrs. Isler have driven one at their Stand as above, and, by means of a common lift-pump, procure water from a depth beyond all chance of contamination. The firm also manufacture registering turnstiles, and their contributions are well worth examining.

*Messrs. Mappin & Webb.*

Adjoining the last-named is the exhibit of Messrs. MAPPIN & WEBB, of Oxford Street, who, as agents for the patent Abbotsford grates, are not behind their competitors in the beauty of the articles they exhibit. The Abbotsford grate in its different forms is the only one exhibited, but some of the designs are equal to anything in the exhibition, while the collection deserves high commendation. A unique suite, named "Ye Chimnie Corner," will possess attractions for many, as it carries an air of comfort and cosiness about it for a cold winter's night. A kind of alcove, supported by pillars, is built out from the chimney breast, and this holds a settle-cushioned seat on each side of the fireplace, though "who shall be first" to secure the "coign of vantage" is likely to prove a discursive element in a large family.

*Messrs. Yates, Haywood & Co.*

At the entrance to the east central gallery stands the exhibit of Messrs. YATES, HAYWOOD & CO., of Upper Thames Street and the Effingham Works, Rotherham. This collection is of a similar character to that shown by the firm at the recent exhibition of building appliances at the Agricultural Hall, and include grates, mantels, and the usual surroundings of the fireplace. This firm have recently paid considerable attention to iron mantelpieces and overmantels, and the examples now shown evince much merit, and the



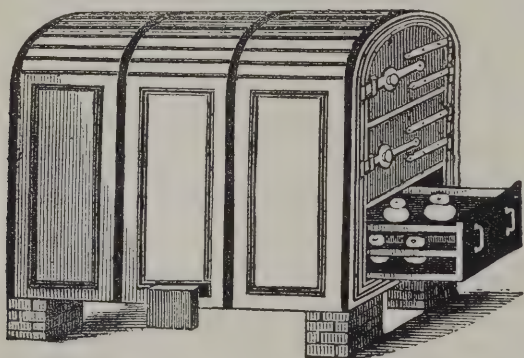
nailed to the joist as shown, but the right-hand one covers it, so that no nail is seen on the surface, and being tongued or grooved, and very accurately made, they may even be slid into their position, and a close and even surface is presented at the top of the floor; thus a saving of time, labour, and expense is gained, and by using the section of board we have illustrated accumulations can scarcely take place in them, and exhalations from lower floors are retarded. But beyond this Mr. Putney's idea has been to introduce



colouring is good. Most of the grates exhibited are of elaborate make, and rich painted tiles enter into their construction largely. This avenue certainly contains the richest specimens of *articles de cheminée* in the exhibition, and it is difficult to say to which firm the palm should be awarded.

*Messrs. Beynon & Cox.*

The question of baking bread by means of gas fuel is one that has been strongly advocated by the Smoke Abatement Institution, the first oven heated by gas suitable for a baker having been exhibited at the Smoke Abatement Exhibition held here in 1881-2. The oven in question, like many first attempts, was rather crude in character, but in the interim improvements have been made, and the firm mentioned above (of Torquay) have also entered the lists as manufacturers of bakers' ovens heated by gas. We have called attention to the productions of this firm for cooking by gas on previous occasions, their principle being the applying the heat from the outside of the roasters or oven, and collecting the atoms in a chamber at the upper part where it is superheated, and can only escape by descending to an even lower level than where it was first admitted. Now, although we are not amongst those who consider there is anything injurious to be feared from the admission of the burning gas into the cooking chamber, if it can be done without so much the better, and this Messrs. COX & BEYNON have, during the last four or five years, clearly demonstrated, carrying on their operations at as small a consumption of gas as most of their competitors, and providing a copious supply of fresh air to the oven at the same time. The gas bread-oven recently introduced and patented by them is carried out in a similar manner as regards the non-admission of gas to the inside. In the portion of the exhibition devoted to the bakeries, off the south gallery to the right, one of these ovens is at work baking bread, cakes, &c., from "early morn till dewy eve," and Messrs. Bertram & Roberts, the refreshment contractors to the exhibition, were so pleased with it that they had one sent to the camp at Wimbledon, which was in use during the whole time of the rifle competition. This oven has much to recommend it. As may be seen by our illustration, it is of a portable character, that is to say, it requires no fixing, and may be made to run on wheels for transportation, and under certain conditions may be used as conveniently in the open air as in a covered building, all that is necessary being to carry the gas to wherever it is set. The one in question may be termed a three-decker oven, that is, three ovens deep, each one having two tiers of shelves, and the entire three or either of them can be used at



pleasure, as by means of dampers or side-valves the heat can be concentrated to where it is required, and the outlet for the products of combustion is shown at the lower portion of the apparatus in the centre, there being a corresponding one on the other side. The advantages of this gas bread-oven may be described as follows:—Wherever gas can be obtained this oven can be utilised, and any ordinary business premises may be turned into a bakery. Then we do away with the smoke nuisance, and it is an admitted fact that bakehouses, as at present constructed for burning coal, are the greatest obstacles to the elimination of smoke. A public advantage would thus be gained if bakers generally were compelled to burn gas. From the baker's stand-point the advantages are as great. Apart from the general cleanliness attendant upon gas when used as a cooking agent, there would be a great saving of labour, as well of time, for as regards the latter, there is no necessity for the oven to cool between batches; thus "heating-up" for each fresh batch is obviated, consequently a much greater amount of work can be obtained from it. In the cost of fuel, a point that the baker will look at spite of any other advantage, he will find a decided saving, and the most sceptical must be convinced when the gas account rendered to the firm by the gaslight and coke company who supply the exhibition is shown him. It will be seen, then, that besides the public benefit there is a "pronounced" pecuniary gain, from each point of view, to the baker who adopts gas baking-ovens on Beynon & Cox's principle, and so far as the baking is concerned, the most sceptical must admit, as he sees the contents turned out of this oven daily, that it is as well done as by the most approved coal-oven in the market.

## SANITARY AND INSANITARY DWELLINGS.

THE two houses which have been in course of erection for some time past on the right hand side of the open space leading to the central gallery, at the Health Exhibition, South Kensington, have recently been shown to the visitors, although at the time of opening, and even at the moment we write they are not quite completed. They are of course not intended to educate the classes who form the readers of this journal, but will no doubt be an attraction to a large number of that section who go to the great show-grounds determined to see everything, and to whom private apartments are not sacred provided they can gain access to them. There are no new ideas that we can see enunciated in the arrangements of these two houses. The old proverb that "extremes meet" is certainly not correct in this case, for a wider departure than is to be seen between the two can scarcely be conceived. In holding these mirrors up to nature it need scarcely be said that those to whom the idea was entrusted to carry out have in the one case selected the worst systems and appliances, and almost gone out of their way to make every arrangement as bad as it could well be, and that would scarcely be indulged in by the most advanced of jerry builders, while, on the other hand, the most modern and best appliances are used, showing the two in the strongest contrast. We enter the insanitary house at the basement, and when we reach the top floor we pass into the "perfect" one, and down to the basement, so we cannot by any possibility miss any of the lessons intended for our learning. Entering then through the front area, we find the dust-bin in the position it is too often fixed, viz., against the wall of the house, and near to window or door. The walls of the kitchen show the damp arising through the absence or inefficiency of a damp-proof course, and reaching the scullery, we find the sink in a corner where little light and no ventilation is near it. The waste or overflow-pipe is connected with the drains (unventilated, of course) by means of a common "dip" trap; and here, too, we see the connection of the pipes passing through the interior of the house with bad joints and junction. The joists of the floor rest direct upon the ground. The cisterns—two in number, one in the roof and the other on this floor—and the waste-pipe from each is taken directly to the drain. The one on the kitchen floor is in a most awkward position, with the D-trap of water-closet directly over it. The servants' water-closet is placed under the stairs without light or ventilation, and is of the oldest-fashioned type. Reaching the ground floor we see the soil-pipe again in its passage from the upper storeys, and, if any leakage or defect occurs, we know what the result will be. There is a water-closet on this floor, and it is placed in an objectionable position, and dependent for its light from a window opening on to the staircase, thus contaminating the air of the house. A small commonplace lavatory is fixed in an adjoining chamber, and the waste from this is carried into the D-trap of the water-closet. The next floor—which would be the drawing-room floor in a good house—is omitted from these buildings; on the plea that sanitary appliances are rarely to be found in them, and we proceed upwards to the bedrooms. Here is another water-closet placed under the stairs, opposite the bedroom doors, and, of course, without light or ventilation, ill-applianced, and open to the objections mentioned in the others. A service-box from the cistern in roof supplies this, and the effect upon the water in the cistern generally, from the arrangement of the closets, can be easily imagined, and the partitioning under the seat being unplastered, admits the foul air into the adjoining rooms. Close to the last-named water-closet, and also in a dark confined space, is a servants' slop-sink, the waste-pipe again being carried to the D-trap of the water-closet, and in close proximity we find the bath splendidly ill-constructed. It has no overflow-pipe, and the inlet and outlet orifice is one and the same, so that soap-suds, &c., are returned into it whenever the water is again turned on. This waste-pipe is also connected with the D-trap, and can scarcely be said to be trapped at all; and there are other unsanitary features in connection with it that may be readily assumed by the reader. Reaching the attic we see the cistern, which is made of deal lined with zinc, and the arrangement for supplying the water-closet by the service-box before mentioned. Just outside the dormer window we see the rain-water pipe, which also forms a portion of the soil pipe, a nice accompaniment to our breath of morning air. So far as the other appointments in this house are concerned, they are neither better nor worse than are to be found in thousands of others; and if they cannot be countenanced from an hygienic point, they are certainly not so dangerous as what are generally understood as the sanitary arrangements. The grates and their surroundings are of the ordinary type; it is lighted with gas on the usual plan, a gas stove (unventilated) provides heat to one of the rooms, and the walls are papered with the old-fashioned arsenical wall-papers. We presume, too, to make the *tout ensemble* complete, that the paint used throughout the house is of a poisonous character; but on this head we have no information. There are several details as regards the effects likely to be produced upon health owing to the manner in which the fittings are carried out that we need not stop to discuss, as they have doubtless ere this suggested themselves to the reader, and where everything is pro-



fessedly so bad it is perhaps not complimentary to mention the names of the firms who supplied the work; but as, we presume, they worked to order and are capable of better things, we may mention that of Mr. J. R. ROBERTS, Harrington Gardens, South Kensington, as having provided the general structure, and most of the plumbing and drainage work.

Crossing a passage from where we recently stood, we come upon the third or attic floor of the sanitary house. Here of course all is *couleur de rose*. We find here a well-ventilated and light cistern-room containing two good-sized cisterns, one for drinking water exclusively, and the other for general domestic and sanitary purposes. Messrs. BOLDING & SONS, South Molton Street, W., have supplied these, and they are fitted with overflow pipes, discharging into the open air, and entirely disconnected from all drainage, and they are each fitted with a plug and chain for emptying and cleansing. In all parts of this house wherever a draw-off tap is fixed, it is supplemented with a stop-cock above it, to enable the water to be turned off should the draw-off tap require repairs or leakage occur in the pipes. While on the subject of the water supply, it is as well to mention what are the opinions of the "powers that be" on the subject of the purity of water. There is not a water filter in the sanitary house, and the argument used is that if the water is delivered pure, it should be kept so by paying proper attention to the cisterns in which it is stored. Considering that we find Maignen's water filters erected all over the grounds by the authority of the executive, this seems somewhat of an anomaly, and although we are free to admit that London water is far better than that of most places when delivered to us, we demur to the idea that it is pure, and we also consider that it would be dangerous even in the best regulated household to rely upon the cistern being kept as scrupulously clean as would be necessary to keep the water in as good a state as when delivered. This would require a cistern to be emptied every day or two at the least, and the waste of water would be so enormous that the water companies would soon endeavour to put a stop to it. We cannot imagine this to be the collective opinion of the executive, and we imagine few medical men could be found to endorse such a view. Ventilation is carried out pretty freely all over the house, both inlets and outlets being used. The firms who have supplied them are Messrs. KITE & Co., Chalton Street, N.W.; Mr. EDWARD WOOD, Red Bank Works, Manchester; while Messrs. STRODE & Co., Osnaburgh Street, N.W., have fixed Harding's air-diffusers, an inlet ventilator in which the air is "filtered" before entering the apartment. An excellent system of vertical inlet ventilation is carried out in all the windows, which have been made under the patent of Mr. R. ADAMS, of Great Dover Street, S.E., a system that most of our readers, we suspect, are conversant with. We allude more particularly to the swing sashes, enabling the windows to be entirely cleaned from the inside, and so avoid accident. The ventilation before alluded to consists in having a deep bottom bead on the sill of the frame, so that by raising the bottom sash a few inches air is admitted in an upward direction (the proper way) between the meeting rails of the sashes in the centre, and without draught, the bottom of the window frame being still closed, not having been raised above the deep bead. This kind of ventilation may be indulged in with perfect safety against the window being opened from the outside, as it is secured by a new patent fastener of Mr. Adams's invention. This consists of spring bolts fixed on the upper rail of the lower sashes, with the points towards the sides of the top frame. Into these plates are set having three or four slots, and, according to the height the lower sash is lifted, so the bolt enters one or the other of them. Some of the other windows that cannot be so easily reached for opening are actuated by cords with patent self-locking apparatus at the sides, and these again cannot be "operated" upon from the outside. Gas is laid on throughout the house, the fittings having been supplied by Messrs. FARADAY & SONS, Berners Street, Oxford Street, and they are all supplied with ventilating tubes to carry off the products of combustion. The electric light is also being fitted up in it by Messrs. WOODHOUSE & RAWSON, 11 Queen Victoria Street, E.C. Descending to the next floor, we notice a housemaid's sink provided by Messrs. CLIFF & SONS, of Wortley, Leeds, made of the enamelled stoneware that is a speciality with them. The water-closet is a wash-out, contributed by Messrs. SCRIVENER & Co., Fitzroy Road, Regent's Park, who have also supplied the pan-closets, soil-pipes, some of the sinks, and other material. The bath-room adjoining has been fitted up, as regards the appliances, by Messrs. BOLDING & SONS; and we need scarcely add that their most approved fittings have been used; that everything has been done in the surroundings of these three very necessary apparatus to render them as perfect as possible, and they are planned so as to be shut off or practically separated from the sleeping apartments. The floors generally are of parquet, as offering the best from an hygienic standpoint. The apartments call for no particular remark beyond what applies to our prior observations as to the general arrangements. All the wall-papers used are of course non-arsenical, and are of the low-toned colours now in vogue. The stove grates—rather æsthetic in character—wood chimneypieces, and tiles have been sent by Messrs. SHUFFREY & Co., Welbeck Street, Cavendish Square, the marble chimneypieces and fancy tiles coming from Messrs. E. & C.

BRABY, Belvedere Road, Lambeth; and here we may remark that the joiner's work, papering, painting, and decorating was carried out by Mr. GEORGE HOWE, 41 Wigmore Street, W., the paint used being that of the Patent Liquid Fireproof Cyanite Co., being a fire-resisting paint for woodwork. Passing to the ground floor (the drawing-room floor having also been dispensed with here), we find the water-closet fitted with Tyler's waste-preventing valve, fitted by Messrs. DENT & HELLVER, of Newcastle Street, Strand, supplied by a separate cistern, soil-pipe carried outside, ventilated at top and bottom, and a lavatory adjoining, carefully secured against nuisance of any kind. We now descend to the basement, containing the usual appendages of scullery, sink, servants' water-closet, &c., all of the most approved character. Some of the water-waste preventers have been fixed by Messrs. PURNELL & SON, Vincent Street, Westminster, and are on the syphon principle, and others were supplied by Mr. O. D. WARD, of Upper Thames Street, E.C. Thus in numerous instances types of various well-known and reliable appliances have been selected in preference to confining them to one make, which would not have been generous to other makers. The plate-glass used in the windows was contributed by Mr. WILLIAM RAMSAY, of Farringdon Street, E.C. The only other feature of interest within the house that we have not mentioned is one of Messrs. DOULTON & Co.'s open fire, ventilating, fire-clay stoves, and the same firm provided a vitrified damp-proof course for the walls. Passing into the back area, we find air bricks supplied by Mr. GEORGE JENNINGS, of Lambeth, to ventilate the joists under the basement floor, and the cast-iron system of drainage shown, the joints being made with lead, and the pipes contributed by Messrs. R. LAIDLAW & SON, Little Bush Lane and Alliance Foundry, Glasgow. A large disconnecting chamber is shown into which all the pipes enter, and so on to the main drain, and this disconnecting chamber is also ventilated by an adjoining air inlet, which allows the air to enter the chamber along the drains and up the soil-pipe. All connection between the house and the drains is cut off by means of a syphon gully trap, of Messrs. BAILEY & Co., of the Fulham Pottery, S.W., who have in addition supplied some of the other drainage appliances. The area, which is of the usual width, is lined with the fine white-glazed bricks manufactured by Messrs. CLIFF & SONS, Wortley, Leeds. It must of course be understood that the framework of these houses is of wood, and they have been covered with HITCHING'S patent fire-resisting plaster slabs supplied by the company, 1 Gresham Buildings, Basinghall Street, E.C. These slabs, mentioned in a descriptive notice in *The Architect* on a previous occasion, enabled the work to be completed in a much shorter time than would have been the case had any other medium been employed. One other meritorious feature deserves mention, and that is a portable galvanised iron dustbin, supplied by Messrs. T. H. PEIRCE & Co., Weymouth Street, Portland Place. There are at the moment we write one or two rooms in the basement not yet complete, and one of these has very much the appearance of what a dining-room should be, judging from the colouring and fittings; but as we are not in possession of information regarding them, we defer any remarks.

And now our description is finished. Judging from the *on dits*, the executive gave their consent rather grudgingly to the scheme (which originated with the Dwelling-house Committee), as from what we are told great difficulty was experienced by them in obtaining sufficient funds from the executive and suitable space on which to erect them. The absence of the "sinews of war" in sufficient quantity is thus mentioned by Mr. H. H. Collins, F.R.I.B.A., in a paper:—"The special committee had desired only to use such appliances as they were enabled to pay for, so that they might stand perfectly clear from all imputations of favouritism. Lacking funds, however, to proceed with the objects they had in view, they were forced to obtain the assistance—which was cheerfully accorded to them—of various manufacturers, but they impressed upon them that in using their appliances, they only employed them as being good types of such fittings as ought to be properly used in the construction of a sanitary house." Further on, he says that "the Special Committee would have desired to have given practical illustrations of good methods of heating, lighting, and ventilation, but the time and *means* (the italics are ours) at their disposal were quite inadequate to allow of their showing more than mere sketches of these details." Taking all things into consideration, and looking at what we may call the lukewarmness of the executive in the matter, we should not have been surprised had the "Special Committee" declined to carry out their idea, and we are inclined to think visitors would not have experienced a great amount of loss had the houses not been erected at all.

The Buccleuch Memorial Committee have requested Mr. R. Rowand Anderson, of Edinburgh, to prepare designs for the national memorial to the late Duke of Buccleuch. The execution of the statue, which is to be of bronze and of colossal proportions, has been entrusted to Mr. Boehm, R.A. The memorial is to be erected in Prince's Street Gardens, Edinburgh.



## NOTES AND COMMENTS.

THE unexpected success of Messrs. LEEMING & LEEMING in the competition for the Admiralty and War Office has given rise to the insinuations which are customary whenever an architectural competition has been decided. There are always busybodies who find it a duty to reveal how little a successful competitor has had to do with his design, and after listening to them it would appear as if the most incompetent men are invariably the winners. If the aid of an assistant has been obtained in the preparation of the drawings it is assumed that all the credit should be given to him. In Messrs. LEEMING'S case we understand that the prize was gained solely by the geometrical drawings, which were made by the two brothers, with the aid of their draughtsman, Mr. FARRAR, and that the perspective did not influence the decision. As sculpture had to be shown, Messrs. LEEMING were acting within their rights to employ the aid of a figure draughtsman, but to cavil on that account is absurd. It might almost be said, with as much reason, that a framemaker should not be employed to make the strainers.

THE meeting of the British Archæological Association will commence at Tenby on September 2, under the presidency of the Bishop of St. David's. An interesting programme has been arranged. Tenby itself has much to show, and there will be excursions, among other places, to the Edwardian House at Eastington, to Angle, of which GIRALDUS CAMBRENSIS was rector, to Stackpole Court, Carew Castle, Upton Castle, and Pembroke. Cromlechs, barrows, and various prehistoric remains are to be found in the district, and will receive attention. St. David's and the neighbourhood are among the attractions which are set down for the "extra days." Papers will be read at the evening meetings on "Manuscripts connected with Pembroke," "The Extent of the Ancient British Church," "The Municipal Records and Seals of Tenby," "Gumfreston Church," and "Manorbere Church."

SOUTH SHIELDS has been supposed to be a prosperous place; but, in spite of their shipping trade, the inhabitants consider themselves to be too poor to undertake the cost of erecting a town hall and municipal offices. That the buildings are needed is admitted. It appears there is only "a miserable and unsanitary place" to hold trials, and the officials are compelled to carry on their work with much inconvenience. A site that would answer belongs to the town, and if not approved another could be purchased without difficulty. But it would be necessary to undergo taxation for the erection of a building, and the fear of adding a penny to the poundage rates has overcome the wealthy merchants and shipowners. The Town Council are convinced of the necessity of new buildings, but have not the courage to carry out the duty which is entrusted to them.

THE power possessed by an architect in withholding a certificate is, from its magnitude, considered by lawyers to be inequitable, as it may be used to the disadvantage of a contractor. Happily the majority of architects are not so minded, believing with SHAKESPEARE that while it is excellent to have a giant's strength, it is tyrannous to use it like a giant. But the reverse occasionally happens. In the case of an unfortunate builder which last week came before the Glasgow Bankruptcy Court, the bankrupt stated that with regard to some work at Lamlash, "the measurements were sent to the architects in December last, and up to the present time they had neither approved nor disapproved of them, although bankrupt had repeatedly applied for them. He considered there was still a large balance due on the job. In consequence of not getting the measurements certified the firm fell into difficulties, having no money to pay their creditors." As the bankrupt's statement does not appear to have been disputed by the creditors, or contradicted by the architects, it may be assumed to be a correct description of the origin of his bankruptcy, although it is possible the amount of his "large balance" would be reduced on examination. The architects referred to by the bankrupt are Messrs. H. & D. BARCLAY, whose names are not unknown in law proceedings, as they were the architects of the Board school at Pollockshields, where, it will be remembered, the play-shed fell and killed four children.

THE Cathedral Commissioners have presented a report upon Manchester Cathedral. This building is in the somewhat anomalous position of being a parish church and a cathedral. The revenues of the capitular estates are so divided that it will be necessary to pass an Act to appropriate a sufficient portion to maintain the cathedral. Probably the easiest way out of the difficulty would be to erect a new building of which the city might well be proud, but it is supposed that the affection for the old church is an impediment. There is no reason why the church should not exist for parochial uses, but no restoration or alteration can make a cathedral out of it that will correspond with the present position of Manchester. The bishopric was founded in 1847, and since that time the Dean and Chapter have had much difficulty in arranging the affairs of so peculiar a trust.

THE eighteenth-century architects in England would seem to have been willing to recognise the principle of a division of labour when dealing with a client who was a nobleman. A curious story which illustrates this compliance was told by the Duke of BUCKINGHAM to a party of archæologists who lately visited Stowe. When Lord TEMPLE came into possession of the house he resolved to construct a large hall, a large portico, and a large flight of steps. The external work was entrusted to one architect to design, and the internal to another. When the plans arrived they were modified by His Lordship, and no doubt to the great delight of the courtly architects. In fact, Lord TEMPLE was the master mind, and the architects were mere assistants. It is not surprising to learn that, with such a client, the alterations occupied about twenty years, or that, as time went on, a great part of the house had to be sacrificed to the owner's love of dabbling in bricks and mortar. If the histories were as well known, a similar story could probably be told of many another house, and that the original unity of a dwelling was often destroyed in order to gratify an amateur.

IF students from the country wish to sketch the exterior of the Courts of Justice, especially on the northern side, they will find the present time favourable. The whole neighbourhood of Carey Street and Lincoln's Inn is now deserted. The opportunity has been used to carry out some works in the Courts. The pavement of the entrance porch has been taken up in order to approach the vaults where machinery for electric-lighting is placed. One work might have been well omitted, namely, the iron railing opposite St. Clement Danes Church. A screen existed there, but as it was a continuation of the line of frontage of the buildings, and the pavement was curved, there was a part of the flagging somewhat wider than the rest. This was an advantage; but, for some unknown reason, the width of the pathway was decreed to be made uniform, and, consequently, the railings were set up. There is, consequently, a double screen enclosing a piece of flagging; and, apart from the waste of material, the effect is unpleasant and injurious to the appearance of the Courts. It should be removed without delay.

A NEW variety of the competition system has been introduced in connection with the proposed Liverpool Cathedral. Architects who had designed churches—whether erected or not—were invited to submit drawings, which were to be referred to Mr. CHRISTIAN, in order that he might make a selection. It is understood that a very large number of designs were sent in. The architects who have been selected are Mr. PEARSON, R.A., Mr. BODLEY, A.R.A., Mr. JAMES BROOKS, and Mr. WILLIAM EMERSON, and they have been asked to prepare sketch designs for the cathedral. It is remarkable that not one Liverpool architect is among the competitors, although the project has been long studied in the city. It is also a surprise, considering the number of Classic buildings in Liverpool, that the Gothic style has been adopted, especially when it is known that the first bishop has no admiration for the symbolism which that style expresses.

BOXLEY ABBEY will shortly be sold by auction, and some interest attaches to this event. The abbey was founded about the middle of the twelfth century by WILLIAM D'IPRES, Earl of Kent. EDWARD II. took up his residence at this abbey during the siege of Leeds Castle in October 1221, from the refusal of its governor to provide lodgings for Queen ISABELLA and her suite when going on pilgrimage to Canterbury.









"INK-PHOTO" SPRAGUE & CO. LONDON.

THE WATER  
FROM A PAINTING BY



May 25<sup>th</sup> 1884.



IG PLACE.

MR F. A. BRIDGMAN.



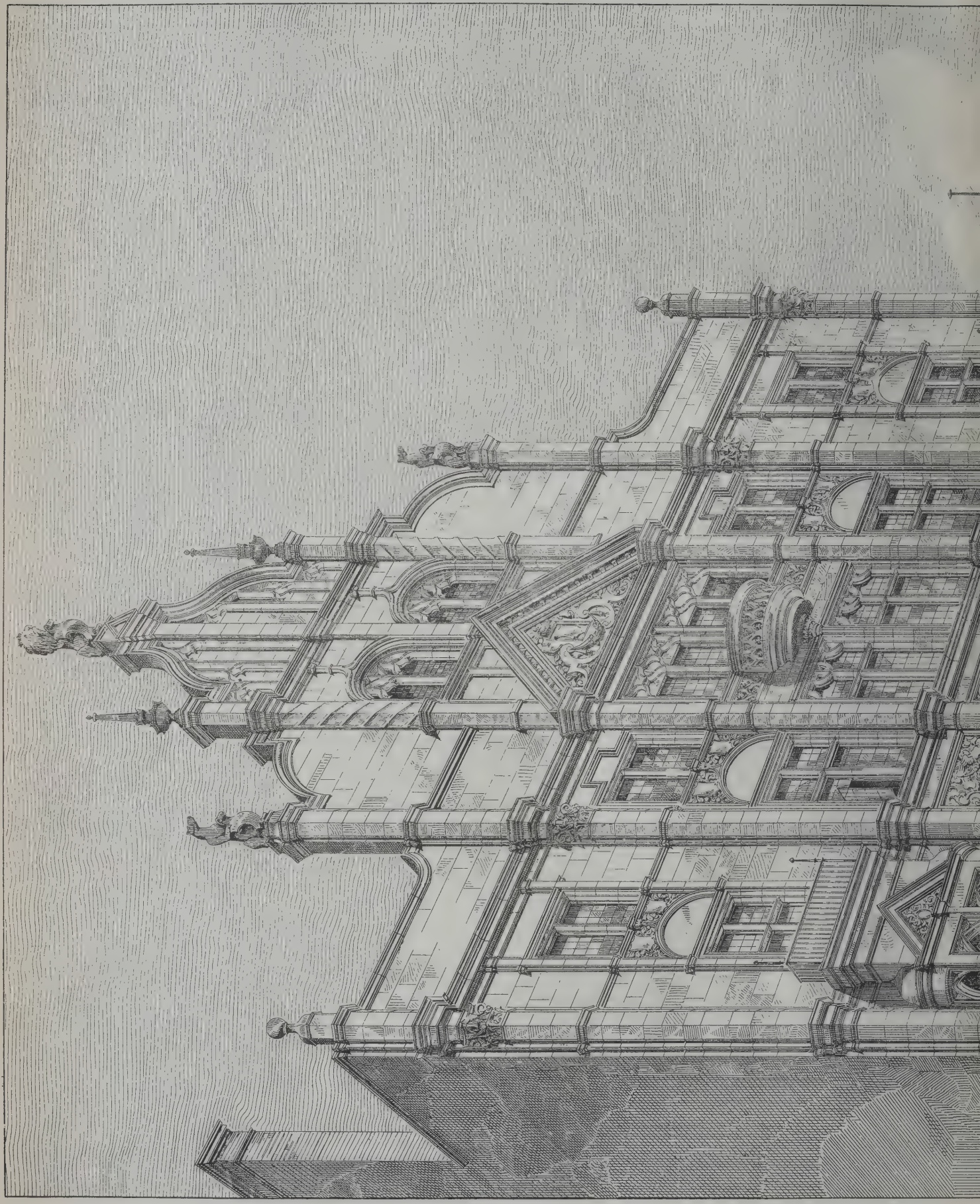




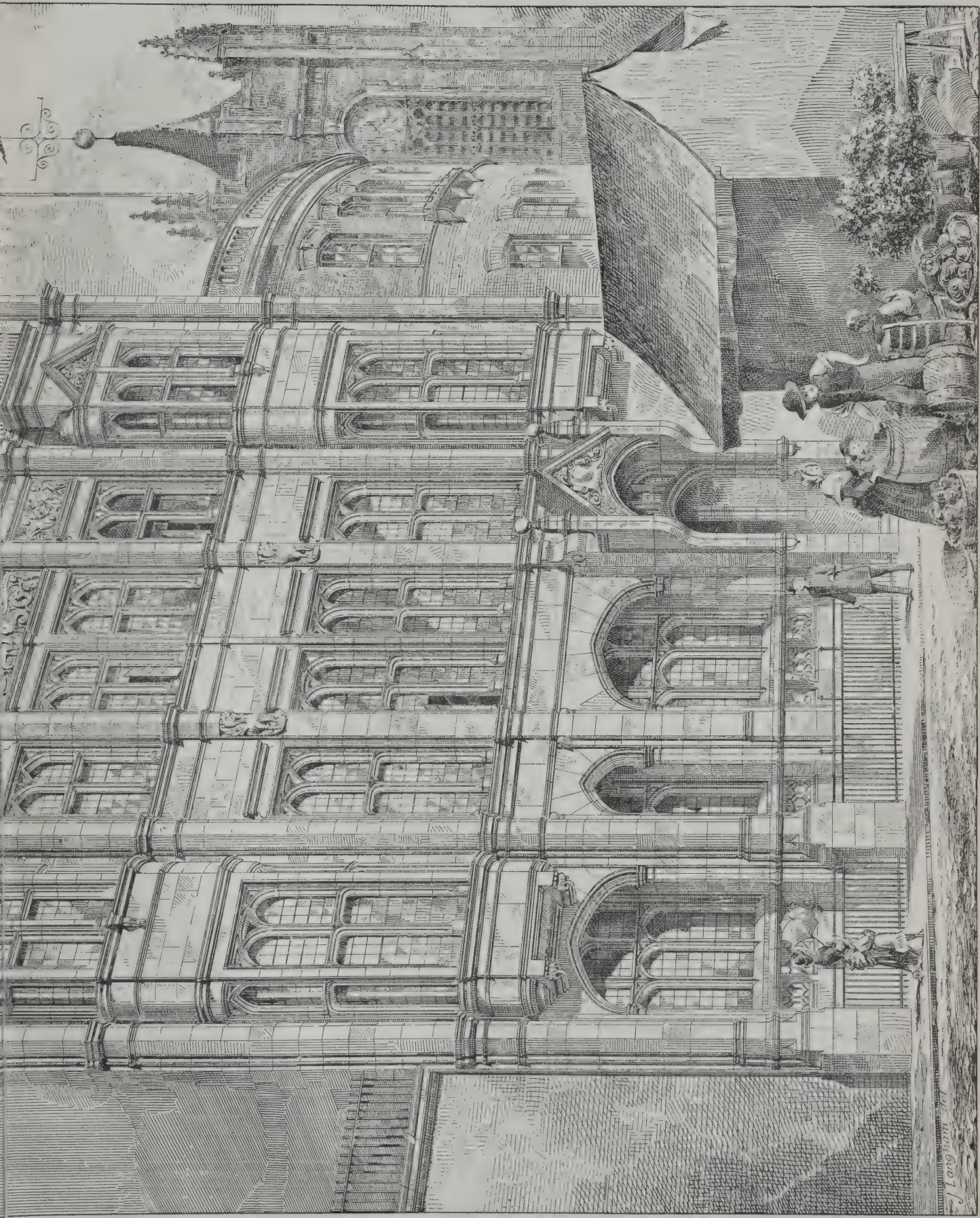




Die Architektur, Aug. 23. 1884.







Quaque 4 22. Minus. 1844

WAREHOUSE, BLACKFRIARS ST., MANCHESTER.

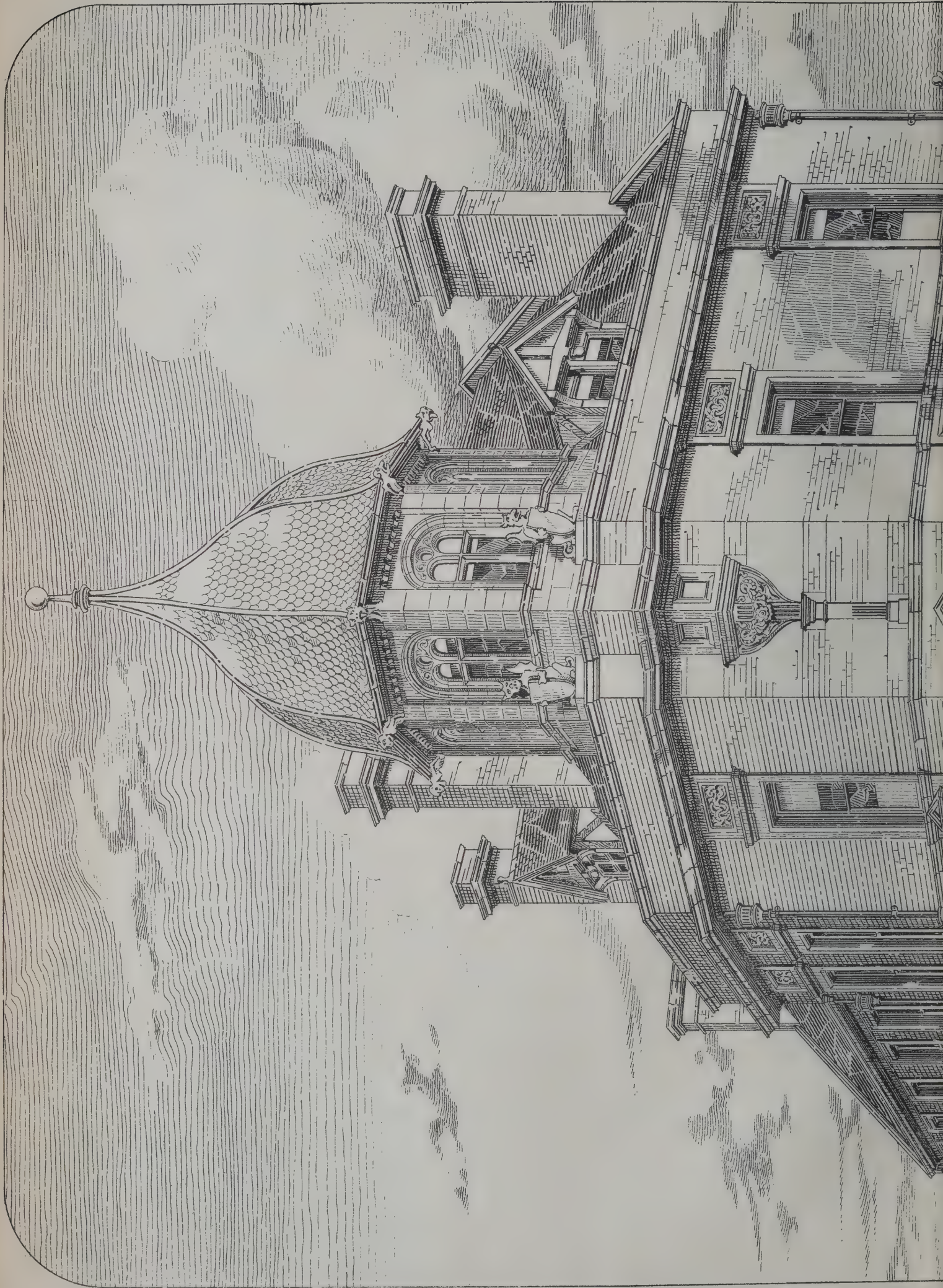
















**BUSINESS PREMISES. CALL LANE. LEEDS.** Messrs Chorley & Cannon. Architects.  
15, Park Row, Leeds.







## ILLUSTRATIONS.

THE WATERING-PLACE.

WE publish a companion to Mr. BRIDGMAN'S eastern picture that appeared in last week's *Architect*. It will be seen that the artist has treated this everyday scene in a manner that is entirely original, and we must regret that we are unable to suggest the charming colouring of the original.

WAREHOUSE, BLACKFRIARS STREET, MANCHESTER.

THIS illustration is a reproduction of a drawing which was exhibited this year in the exhibition of the Royal Academy. The warehouse was erected a short time since for Messrs. BAERLEIN & Co., from the designs and under the superintendence of Mr. F. H. OLDHAM, F.R.I.B.A., 23 John Dalton Street, Manchester.

BUSINESS PREMISES, CALL LANE, LEEDS.

THE buildings represented in the illustration are being erected by the trustees of "The Charitable Uses Trust," to replace some dilapidated property which formerly stood on the site. They are planned to suit the requirements of the intended tenant, Mr. JOHNSON, who is a wholesale stationer and newsagent, and who will do a good deal of printing on the premises. The buildings occupy a somewhat prominent position at the corner of the junction of two much-used thoroughfares, and an attempt has been made to emphasise the situation by the provision of an angle turret with a domed covering. The contractors for the work are all local men, the architects being Messrs. CHORLEY & CONNOR, of 15 Park Row, Leeds.

## THE NEVILL MEMORIALS AT BRANCEPETH.

A PARTY of members of the Royal Archæological Institute visited Brancepeth Church after the meeting in Newcastle-on-Tyne, when the following paper was read by the Rev. H. J. Swallow:—

The colossal effigy of Robert Nevill, "the Peacock of the North," forms a conspicuous object in the chancel. This monument has been moved from the position it formerly occupied in the north transept. It has been slightly chipped in several places, but after the lapse of more than 550 years it remains the best preserved Nevill monument in existence.

The effigy is 7 feet 9 inches long, clothed in chain mail, with surcoat reaching to the knees. The head rests on two cushions, supported on six lions, with two small kneeling figures between them. The hands are elevated, the legs crossed. The feet rest on a lion. Beside one leg is a dragon, beside the other a muzzled dog, and the space between is covered with foliage. The sword is small, and dependent from a belt under the shield. The shield bears the Nevill saltier, and the label of cadency, by which the effigy can be identified without any manner of doubt. Robert Nevill died in 1319, during the life of his grandmother, Mary of Middleham, being her heir. There is no other Nevill to which this label could apply, and the whole character of the monument is agreeable to the age in which Robert Nevill lived. Stone effigies of cross-legged knights were sculptured down to the time of Edward II. The hauberk was worn by knights having estates, called in the Norman parlance *fiefs d'haubert*. The crossing of the legs is probably due to the whim of the sculptor, who adopted that disposition in order that he might the better exhibit the detail of the monument. Knights with their legs crossed are not necessarily crusaders, and Robert Nevill was certainly not a crusader, although he has often been described as such. The whole design of the monument was boldly conceived and carried out. It is a magnificent relic, and well deserves the reverent guardianship which it has so long received from successive generations of Brancepeth people, who have been content to pass away into the silence of the churchyard without carving their names upon, or otherwise disfiguring, this splendid monument of antiquity. Let us hope that a like spirit of intelligence may guide the hands of future generations.

The oak monument on the south side of the chancel has been less fortunate. It met with the fate of the prophet Isaiah. The name of the individual by whom it was sawn asunder has not yet come down to us, his memorial having perished for ever. Leland says that "in the paroch church of Saint Brandon, at Branspeth, be dyvors tumbes of the Nevills. In the quire is a high tumb of one of them, portured with his wife." The "high tumb" having been sawn asunder is now a low one. The upper part of the monument on which the effigies rest, and the plinth, with the bases of eighteen canopied niches, alone remain. The main body

of the tomb, with all its richly-carved figures, will never be seen again.

A view of the monument as it originally appeared has been preserved in the Herald's College, and a copy is given in Surtees' "History of Durham." By many writers it is held to be the monument of the great Ralph Nevill, first Earl of Westmoreland, and Margaret, his first wife. Stothard, however, describes it as that of the second earl, and Margaret, his second wife. Mr. John Hewitt, in his learned and exhaustive supplement to Stothard's work, is evidently perplexed over this monument. I cannot do better than append his remarks *in extenso*.

The remarkable points in these effigies are the collars which decorate the necks of the figures. The Lancaster badge of S.S. is now discarded, and we find that of York, the white rose in the sun, adopted.

In his body armour the knight is a good hundred years behind the fashion of his day. His suit is almost identical with that of the Black Prince. It is not easy to assign the cause of this resemblance. It may be attributed to the remoteness of his province from the metropolis, to the custom of wearing inherited armour, to the artists having copied some older monument, or to his having affixed a new head to a more ancient body. All these are probable causes, and all these may be very far distant from the truth.

In the head-piece of our knight, however, we have a novelty, the visored salade or sallet with its mentonnière. This kind of head defence approached so nearly to that of the ancient Greeks that the Italians contrived the ocularium after the classic model, and that head-piece now known to collectors as the Venetian salade is a *fac-simile* of the Greek casque, so familiar to us from the numerous representations of the armed head of Minerva. In fight the salade was brought down over the face so as to join the gorget. Subsequently a visor was added to it, the mentonnière retaining its old forms and duties. The Nevill effigy gives but a very imperfect idea of the visored sallet. It is evident that no artifice could bring that ocularium in useful proximity to the knight's eyes, and the mentonnière seems equally shorn of its fair proportions. Let us, however, respect the sculptor's motive, which was, no doubt, to bring into view as much as possible of the knight's countenance.

This head defence appears but very rarely in monumental sculptures. At Meriden, Warwickshire, is a good example figured in Bloxam's "Monumental Architecture." In brasses it is by no means of frequent occurrence. One of the best is that of Edmund Clare, Esq., in Stokesley Church, Norfolk, which is engraved in Cobman's works, Vol. I.

Lady Nevill wears the kirtle with tight mitten sleeves, made very low in front. The girdle, worn loosely, is attached by an ornament of suns similar to those of the collar; its chain probably suspends an aulmonière. The sideless surcoat is curious from its deep facing, most likely of fur. The mantle offers nothing unusual. The head-dress, which we must carefully disentangle from the tassels and corners of pillows, is a mitigated form of the steeplehead, and may be regarded as transitional between that and the pedimental coiffure.

The York badge of the white rose in the sunparhelion exhibited on the collars of these effigies was assumed by Edward IV. after the battle of Mortimer's Cross, in consequence of which victory he added the device of the sun to the white rose.

If, as Stothard asserts, this monument was erected to the second Earl after his death in 1484, it seems strange that the Yorkist badge, so fatal to the Nevills at the battle of Barnet, should appear such a prominent object on the necks of both effigies. If it be a late erection to the memory of the first Earl, and placed in the church at a time when the Nevills were in close fellowship with Edward IV., I can understand the introduction of the Yorkist badge. The body armour of the male figure is certainly more in keeping with the time of the first Earl than the second. Margaret, the second wife of the second Earl, was not buried at Brancepeth, but at Doncaster. Margaret, the first wife of the first Earl, was buried at Brancepeth.

The first Earl lies at Staindrop; but I have not been able to discover the burial-place of the second Earl. He was not a very remarkable character, and I see no sufficient reason for the association of his name with the Brancepeth monument. I have seen it stated that the canopied niches of this monument were filled with figures of the second Earl's children, but the author of this statement failed to remember that this Earl had only two children, and there are the remains of eighteen niches.

Leland says "there lyith in the chapelle on the south of the quier a Countess of Westmoreland, sister to Bouth, Archbishop of York. There lyith in that chapelle also the Lord Nevill, father of the Erle that now is (4th). This Lord Nevill dyed, his father the Erle yet lyving: whereupon the Erle tok much thought and dyed at Honreby Castle in Richmondshire, and ther is buried in the paroch church. The Erle of Westmerland that is now had an elder brother, and he lyith in a little tomb of marble by the high alter, on the south side; and at the feete of hym be buried four children of the Erles that now lyvith."

The high marble tomb that now lies under the tower (having been moved from the Jesus Chapel in 1876) is doubtless that of Matilda, daughter of Sir Roger Booth, of Barton, wife of the third Earl, and Ralph, her son. It is ornamented with the quatrefoils encircling plain shields. The shields on the south side have evidently been painted, and the Nevill saltier can be indistinctly traced. Lady Boyne, Rev. J. Lawson, and Mr. H. T. Peirson, were present during the removal of this monument. The skulls and other remains of two persons were discovered and reinterred.



Hutchinson speaks of a table monument in the Jesus Chapel without inscription, but exhibiting a shield with the Nevill arms dexter, sinister three boars' heads. Before the restoration of the church in 1863 an altar tomb without inscription is described by Rev. J. T. Fowler, and also by Mr. C. Hodgson Fowler, as standing in the centre of the chapel. A large marble slab is still recumbent under the organ.

Above the corbels of the nave roof will be noticed on the north side a bull, on the south an angel, each bearing a shield with the Nevill saltier. The bull's head of the Nevills also appears on the coloured panelling placed over the chancel arch, above the geometric tracery.

Bishop Dudley granted license, September 20, 1483, to Ralph Lord Nevill and Isabel his wife to found a chantry for one chaplain at the altar of our Saviour in the south part (*ex australi porte*) of the church of St. Brandon, Brancepeth, with an endowment in lands of ten pounds yearly. I have in my possession an exact copy of the original instrument.

### ENGINEERING SCHOOL, CAMBRIDGE.

THE new engineering school attached to the University of Cambridge has attracted a large amount of success. Professor Stuart was the originator of the school, and entirely at his own expense he fitted up some small workshops containing a few vices, some foot lathes for iron turning, some woodworkers' benches, and necessary tools. Skilled workmen were secured to teach the handicrafts, and the experiments rapidly became an assured success. Having demonstrated to the authorities of the University the practicability of his scheme, the Museums and Lecture-rooms Syndicate took the matter up, and since that time grants have been made from the University funds to enlarge the old workshops, to provide tools, &c. Application was also made for an assistant to the professor. This reasonable request was granted by the University, and resulted in the appointment of Mr. James Lyon, B.A., of Clare College, a graduate in mathematics, honours, and who possessed also the more important qualification, namely, being an engineer of some fifteen years' experience. The result of Mr. Lyon's appointment was to develop the scheme of the professor very rapidly. The workshops were found too small for the accommodation of the students, and the University authorities being again appealed to, new buildings were provided, and also additional appliances. There is now a foundry, smiths' and pattern-makers' shops, and a model engineering establishment in the very centre of the new museum buildings. The number of pupils continues to increase, and in the Lent term there were sixty-one. Professor Stuart reports that the average amount of work, both theoretical and practical, done continues to increase, and the work is of a higher standard than before. "I attribute," says Professor Stuart, "these results chiefly to the great ability, energy, and application with which Mr. Lyon, previously demonstrator and now superintendent, who now really manages the department, combines practical experience and theoretical knowledge in a manner rarely to be met with." Although the majority of the students are members of the University, others are admitted. Some of the members of the University have taken their degree, but the majority consist of those working to pass the University examination in mechanism and applied science. There is an excellent drawing office attached to the department, in which the students learn machine construction and designing, and they usually design some piece of mechanism which they are afterwards to make themselves in the shops. In his way one pupil has made a dynamo to absorb 6 horse-power, and this is now being used to light his father's house with electricity; another student has made a pair of steam-engines for a pleasure yacht; a third, a double-gear lathe; a fourth, a morticing machine; a fifth, a circular saw bench, and so on. There is no restriction as to what the pupil embarks on, save that it must be some real piece of work, not a plaything, and also each pupil has to go through a preliminary course which is prescribed by the department for those who are quite ignorant of engineers' tools and the uses to which they may be put. Among other things, philosophical instrument making is carried on to a large extent, electrical appliances are made and sent all over the world, while much work is executed for the different University laboratories, and the largest heliostat ever made has just been completed for Professor Living to enable him to examine the spectra of sun spots. With a view to making the workshops attractive and useful to intending emigrants, one shop is devoted to cabinet-making and general wood construction, and this is found of great use to young men who intend to follow the pursuit of land and estate agents.

A completely new line has been entered upon this summer, which, no doubt, will be of great service to many of the pupils, to say nothing of the benefit to the University. A large addition had to be made to the premises of one of the scientific departments by building another storey on the top of an existing museum, 120 feet long by 25 feet wide; but it was very undesirable to disturb the ceiling over this museum, which, being nailed to the main timbers

of the roof, rendered the subject a difficult one to deal with. Under these circumstances, the University authorities asked the advice of the mechanical department, which undertook to do the work. The result of the undertaking has been a complete success, for the ceiling has been cut free from the roof, and the latter, weighing about fifty tons, has been lifted bodily a height of 12 feet without removing a slate. The whole work undertaken was estimated to cost 3,000*l.*, and it is anticipated that a large saving will be effected on that estimate in consequence of the work having been carried out under the direction of the superintendent of the mechanical department.

### MOSCOW CATHEDRAL.

THE new cathedral at Moscow (says a correspondent of the *Times*) is one of the most remarkable churches in Europe. Not many cathedrals can boast of having been built in one lifetime, but there are Russians still living who saw the French army depart from Moscow, to commemorate which event the church of St. Saviour has been erected. In less than three months after the retreat of the foe a decree went forth from Alexander I. that a memorial temple should be built, and five years later the foundations were laid, but not on the present site. The emperor accepted plans which, had they been carried out, would have given to Russia the highest building in the world—namely, 770 feet, on the Sparrow hills, between the routes of the entrance and departure of Napoleon; but the undertaking for awhile collapsed, and the architect and building committee, after expending or misappropriating in ten years upwards of four millions of roubles, were banished, and their estates confiscated. The Emperor Nicholas adopted new plans, and chose the present site, which has cost, with embankment, terrace, &c., upwards of 180,000*l.*, and where at the outset a nunnery had to be removed and 70,000 cubic feet of earth to be displaced before, on July 27, 1838, the laying of the foundations was commenced. The building continued slowly to rise for twenty years, and in 1858 the scaffolding was removed, this latter item alone having cost 277,000 roubles, or upwards of 40,000*l.* (reckoning the rouble, that is, at three shillings, as throughout this letter). A quarter of a century more has been expended on fittings and decoration. The style is ancient Russian, or rather Græco-Byzantine, the most striking feature of which, to a Western eye, on the exterior is the five copper cupolas, for the gilding of which were required 900 pounds of gold, their total cost being upwards of 170,000*l.* The domes are surmounted by crosses—the centre one, nearly 30 feet high, standing 340 feet from the ground. The building covers an area of 73,000 square feet. The bells, as usual in Russia, are of ponderous weight. The largest, or "holy-day" bell, weighs 26 tons, or half as much again as "Great Paul." Even the second, or "Sunday" bell, is within a ton's weight of our bantling; while the smallest of the "every-day" bells descends to about 30 pounds. The cost of the peal was upwards of 13,000*l.*

The foundations of the church are of Finnish granite, and the whole edifice is faced with marble, the doors being of bronze ornamented with Biblical subjects, and lined with oak. The principal entrance measures 30 feet high by 18 feet broad, and the two doors weigh 13 tons, the total cost of all the doors being 62,000*l.* Thus, it will be allowed that many of the features of St. Saviour's are produced on a magnificent scale, though one familiar with the spire of St. Stephen's, Vienna, or that of Salisbury, the west front of York Minster, or that of Amiens, might hesitate to pronounce the effect of the exterior of St. Saviour's beautiful. As to the interior, there can be, I think, little difference of opinion. I have seen most of the celebrated cathedrals in Europe (with the exception of those of Spain), but in its way I know of nothing so exquisite as the interior of St. Saviour's at Moscow. The building is erected in the form of a Greek cross, three of the broad ends of which form corridors, lower and upper, surrounding three sides of, and open to, the central square or temple proper, while the fourth end is occupied by the altar and its appurtenances. The upper corridor reminded me of the galleries in Santa Sophia at Constantinople. The walls are adorned with frescoes illustrating principal events in the history of the Russian Church, one of which, I remember, elicited during my visit a characteristic remark from an American tourist, whom, with his daughters, I had invited to join my party. The painting represented an ecclesiastic commencing to dig the foundation of the Kief Monastery, in the eleventh century, before which my Transatlantic cousin pulled up and exclaimed, "Halloa! turning the first sod for a new railway." The walls of the lower corridor or "procession gallery" are adorned with paintings commemorative of the battles of 1812.

But it is when one stands in the temple proper, and looks above and around that the gorgeousness of the building is so striking. The floor of this part is 220 feet square, the length of the cross either way 270 feet, and the height from the ground to the cupola measures 230 feet. The floor is of marble, and the walls are lined with exquisite varieties of the same material. It was intended at first to use only Russian marble, but some amount of Italian was subsequently found to be indispensable.



The total cost of all the marble in the building exceeded 300,000*l.* Lifting one's eyes the galleries are seen to contain thirty-six windows, and the cupola sixteen, all of which are double, with frames of bronze. Round the cupola is one row of 640 candelabras, placed there at a cost of 27,000*l.*, with a second row of 600, costing an additional 12,000*l.* There are four lustres weighing four tons each, and the total number of candles to be lighted throughout the building is upwards of 3,000. At the top of the cupola is a painting by Professor Markoff that will freely shock the principles of Westerns, who object to the use of pictures in worship. It represents in colossal proportions the first person of the Blessed Trinity as an old man with the infant Jesus. The height of the figure is 49 feet, the length of the face 7 feet, and the height of the infant 21 feet. Also, below the cupola are a number of figures of apostles and fathers each 21 feet high. Great expense has of course been lavished on the eastern end of the church. The cost of materials and workmanship for the altar-space, apart from the *icons* or sacred pictures, amounted to 36,000*l.* In this part of the church are some of its most remarkable paintings, most, if not all, by Russian artists. They are too numerous to particularise. I remarked, however, a striking picture of Sergius blessing Demetrius of the Don. I see from my notes that the *Last Supper*, by Semigratzky, and eleven pictures by Verestchagin attracted my attention. The structure of the altar-screen is a departure from the traditional Russian type, for instead of a tall, ugly blank partition, half or two-thirds of the height of the church, hiding the eastern end, the screen of St. Saviour's is low and elegant, and throws open, except for a few feet above the floor, the whole of the sanctuary. But a more marked and, as some would think, unorthodox departure from the customs of the Russian Church is the construction of the altars. I am under the impression, gathered, I think, from the work of the learned Dr. Neale on the Eastern Church, that the "holy table" in the Russian Church should be always of wood; whereas in St. Saviour's I saw two at least constructed of blocks of polished marble, the semblance of a table being given to each by a movable inch board of cypress wood laid on the top. Much of the ornamentation of the sanctuary and its furniture was exceedingly beautiful, notably some enamelled candelabra by Klebnikoff; but perhaps I have sufficiently described this princely cathedral, erected at a cost of two and a quarter million pounds sterling, said to be capable of accommodating 10,000 worshippers, and which from its first conception has been built, as I have said, in a single lifetime.

### COMEDY THEATRE, MANCHESTER.

THE new theatre, which is to be called the Comedy, now erecting in Manchester for Mr. Edward Garcia, is situated in Peter Street, nearly opposite the Theatre Royal. The principal façade, 105 feet in length, and main entrances will be towards Peter Street, the gallery and stage entrances being in Bootle Street. The building is arranged and divided longitudinally into three parts. The front portion contains the entrances and exits, the foyer, retiring and refreshment rooms; the centre portion is occupied by the auditorium; and the back part is devoted to the stage and its appliances. The adjacent property on the western boundary has been secured by Mr. Garcia, in which will be placed the dressing-rooms, property-rooms, and the paint-room, all of which will be approached directly from the street, but conveniently connected with the stage.

The means of ingress and egress have had the most careful consideration of the architect, and have been arranged in consultation with the city surveyor. All public staircases are 5 feet wide, 12 inches tread, and 6½ inches rise; they are constructed of solid concrete resting on iron supports, and without "winders" or other dangerous expedients. Every part of the auditorium is provided with an exit staircase at the opposite side of the house from the entrance staircase, and leading direct into Peter Street. An interesting feature in the planning of this theatre is the placing of the pit below the ground level, and thus enabling the occupants of the dress circle to enter the foyer on a level with the entrance, which is raised one step above the level of Peter Street. All parts of the house are provided with cloak rooms and the necessary conveniences. The seating accommodation will be as near as possible as follows:—Stalls, 70 seats; pit, 667; dress circle, 200; upper circle, 264; gallery, 710; making a total of 1,920 seats, which with standing accommodation would realise an audience capacity of about 2,500 persons.

A new departure has been made in the style and design of the building, the architect having decided to adopt that phase of Gothic architecture only to be found in Venice, or in other words, the theatre is being carried out in "Venetian Gothic." The façade is faced with red brick, and strings, corbellings, oversails, and pointed arches are executed in terra-cotta; the labels, columns, balcony, &c., are executed in Halifax stone, which forms a pleasing contrast to the red brick facing. The interior is carried out in keeping with the style of the exterior; the circle tier will have a handsome front of fibrous plaster, consisting of a small arcading

filled in with gold and conventional flower decoration in colour; the other tiers are simpler in character, but the upper circle tier will have at intervals shields emblazoned with the arms of Lancashire corporate towns. The proscenium will be finished with a deeply moulded architrave, forming a sort of frame to the stage pictures. Above the proscenium will be a recessed arcade formed by three Gothic-headed panels, columns, and archivolts. In the centre compartment will be a seated figure typical of the Drama, those on the right and left being filled respectively with figures, symbolic of Music and Painting. These figures will be flat and decorative in character, and in the style of the proscenium frieze executed for the Prince's Theatre, by Mr. H. Stacy Marks, R.A. The proprietor has determined to furnish and appoint the theatre in the best style, and in keeping with the general character of the building, and in harmony with the scheme of colour decoration. The stage is being laid with due attention to simple but efficient working, and will accommodate any kind of production that may come within the manager's programme. The theatre will be lighted both by the electric light and gas jets, all thoroughly under control, the stage lighting being kept entirely distinct from the lighting of the front of the house. The building is now rapidly approaching completion, and will soon be handed over to the decorative artists, who will finish their work in time for a Christmas opening.

The building has been designed, the plans prepared by, and the whole of the works, including the decorations, are being carried out under the immediate superintendence of the architect, Mr. Alfred Darbyshire, F.R.I.B.A., who for many years was associated with Mr. Calvert and Mr. Browne in the decorations and alterations at the Prince's Theatre, Manchester, and more recently with Mr. Irving, at the Lyceum, London. The contractors for the entire work are Messrs. R. Neill & Sons, the Government contractors, of Manchester.

### THE TOWN OF BUCKINGHAM.\*

THE town of Buckingham is doubtless one of great antiquity. Historians tell us that about A.D. 44 a Roman general under the Emperor Claudius surprised the Britons on the banks of the river Ouse at or near Buckingham; and, further, on the first spreading of Christianity, in the Saxon times, it became remarkable as the burying-place of St. Rumbold, who was born at King's Sutton, November 1, 626, and where he also died, appointing his body to rest there the first year, the next two years at Brackley, and at Buckingham for ever after—where, as the historian and antiquary Browne Willis informs us in his interesting history of the county, a shrine was made for him in the parish church, to which great resort was made by pilgrims, and many miracles are reported to have been wrought by him there.

The same historian tells us that this town is mentioned in the reign of King Alfred on his division of the kingdom into shires, when he fixed on this place as the capital of his newly-erected county, and that his son King Edward the Elder took up his quarters here A.D. 918, caused two forts to be built and garrisoned on each side the river Ouse, and then, advancing towards the Danes, struck such terror into them that they were glad to make peace. Subsequently to the survey of Domesday Book, in which mention is made of the town, few records are to be found. Tradition, however, preserves some memories until recent date of a castle, and adds, besides, "a local habitation and a name," for we have Castle House, Castle Street, Castle Mills, Castle Farm, Castle Fields, and Castle Hill; yet no written record is extant of the building of a castle, nor, as far as I can ascertain, do any traces of a foundation remain, although we read that in A.D. 1484 Richard III. made a grant to John Grey, of Wilton, of certain monies for the food of the king's hawks, secured upon the castle and manor of Buckingham. My learned predecessor, the Rev. H. Roundell, tells us that the bailiff and burgesses of the Corporation were summoned in King Edward III.'s time to send three representatives to the Council of Trade held at Westminster by that Prince; and in Henry VII.'s time the county weights and measures were ordered by Act of Parliament to be kept here. He informs us also that the gaol delivery of felons and all county business was transacted here until (as it was supposed), by the influence of Chief Justice Baldwin, a native of Aylesbury, the assizes were removed to that town during the reign of Henry VIII.

In 1553 Queen Mary granted a charter of incorporation to this borough; a second charter, with increased privileges, was granted by Charles II., A.D. 1684, under the authority of which the government of the borough was conducted until the new Corporation Act came into force in 1835. The year 1568 is memorable in the annals of our town from the fact that on the 25th day of August (as we learn from a mem. in the Corporation book of that date) "the high and mighty Princess, Queen Elizabeth, came in progresse to the Burrow of Buckingham, and at the utmost part of the limits of the liberties of the said Burrow . . . the Bayliff and the 12 principal Burgesses of the said Burrow made their most

\* A paper by the Rev. F. G. Kiddle, read at the meeting of the Bucks Architectural and Archæological Society.



humble submission and received Her Grace. Whereupon Her Highness did admit the said Bayliff to be her Chamberlain within the said Burrow by delivering him one white wand. And to pay proper honour to the said Burrow Her Majesty had, in a most triumphant manner, her sword royal and maces borne, and trumpets blowne, until she came to the mansion house of the Rector or Prebendary of the said Burrow, where Her Highness rested dinner-time; and after dinner ended Her Grace proceeded forward to the town of Bicester," &c.

During the civil wars of the seventeenth century Buckingham, unlike all the other towns in the county, refused to espouse the side of Parliament, and from a document in the Bodleian Library we learn that "this corporation preserved its integrity and was eminently serviceable in assisting the University and City of Oxford, which were the chief support and assistance of King Charles I."

Time will not allow us to quote from the interesting records which are preserved to us of this time, and we pass on to mention the great fire of 1725. In a handbill circulated at the time it was stated that 138 dwelling-houses and a great many barns and stables and other outbuildings were totally destroyed, and that the loss over and above all money recovered from any insurance office whatsoever amounted to 32,682*l.* 13*s.* 6*d.* Unhappily for the appearance of the town, the corporation did not apply for an Act of Parliament whereby the rebuilding of the houses would be regulated—a step strongly urged by Browne Willis, of Whaddon Hall, to whom we have already referred as author of the valuable "History of Buckingham" which bears his name. The mention of this name induces me to quote once again Roundell's words. Mr. Willis, he says, "must be reckoned among the best friends Buckingham ever had. By his exertions a large sum of money, of which he contributed the major part himself, was expended on the repair of the church tower, the spire of which had fallen down on February 7, 1699. He originated the plan for building the present gaol, of which he witnessed the completion by Lord Cobham. He procured the restoration of the assizes to Buckingham, strenuously resisted an intended removal of them to Aylesbury, and persuaded both the Bishop of Lincoln and the Archdeacon of Buckingham to hold their visitations here. Indeed, he devoted his best energies through fully half a century to restore to Buckingham its ancient honours." With this quotation I must conclude this brief and imperfect sketch of the town and proceed to speak of three special points of interest—the Church, the Latin School, and Castle House.

The old parish church of the town stood in the old churchyard, the entire length of the building being 163 feet, consisting of chancel, nave, and side aisles, with two large transepts, and a square tower, supporting a spire of wood covered with lead. If the engravings extant of this church are correctly drawn the date of tower, spire, and nave may be attributed to the thirteenth century. The chancel was built by John Ruding, Archdeacon of Lincoln, upon his appointment to the Prebend of Buckingham in 1471, of which date also we have preserved to us a MS. Latin Bible presented to the church by him, and which through private liberality has once again come into our possession. On February 7, 1699, the tall wooden spire was blown down in a gale of wind, but no material damage was done to the rest of the building. In 1753 the tower was raised in height about 24 feet, but the increased weight of masonry proved too great for the old piers which supported it, and on March 26, 1776, the fall of the tower took place, only a few minutes after the ringers had left it. At the request of the town, Earl Verney gave a site on Castle Hill for a new church, and upon the payment of 4,000*l.* raised upon the security of the poor rates, and the assignment of the old materials of the former church, Earl Temple undertook to build the present edifice, the first stone whereof was laid November 25, 1777, and the building consecrated by the Bishop of Lincoln December 6, 1781. But from the present appearance of the church we should with difficulty picture to ourselves the building of which I am speaking. My immediate predecessor, the Rev. W. F. Norris, now rector of Witney, says when he succeeded to the vicarage in 1862 he found the church in a dilapidated condition. There were sixteen large cracks in the walls, indicating the faulty construction of the windows and scamped foundations, and that the church was altogether in so dilapidated a condition as to be unfit for its purpose. Sir G. G. Scott designed a method of support by buttresses and a general remodelling of the exterior and interior, and, after a period of twenty years, the work has just been concluded, at a cost of about 11,000*l.*, exclusive of the handsome chancel, which was the gift of the present Duke of Buckingham, and built at a cost of over 2,300*l.*, the foundation of which was laid by the late lamented Duchess of Buckingham, July 1865.

The Royal Latin school, which is without doubt the oldest school in the town, was erected by Matthew Stratton, Archdeacon of Buckingham, 1260, who dedicated its chapel to Thomas à Becket, probably in memory of that prelate's visit to Buckingham as Chancellor, 1169. After the lapse of 200 years the building became dilapidated, and the chapel was partially rebuilt by Archdeacon Rudy between 1470 and 1480. After its restoration the building was used as a chantry chapel till 1546, when it was presumably used for the grammar school founded here by the Royal

Commission at that date. In the lapse of years this chapel became for the second time dilapidated. The roof fell in, and the ground floor was dug up and used as a garden. In 1776 a new roof, constructed principally from the timbers of the old church, was placed upon the building by Col. Temple, and the chapel used for divine service during the erection of the present church. Since that time it has again been used for educational purposes. It is an interesting building and will well repay you for a visit if you care to see it.

It is only necessary for me to mention that Castle House was the headquarters of King Charles I. during his stay in this borough, A.D. 1644. Here it was that the Lady Richardson, mistress of the house, received and paid homage to her sovereign and gave him a hearty welcome.

## ENGLISH SCHOOLS.

THE reports of some of Her Majesty's Inspectors of Schools for 1883 have been printed. The following extracts relate to the condition of the school premises:—

### *Durham District.*

Mr. A. E. Bernays writes:—With reference to school accommodation I am able to report most favourably, and, except in one or two cases, there is now ample provision for the district. Since 1879 twenty-three new schools have been opened, *i.e.*, eighteen Board, two Colliery, and three Roman Catholic, while additional premises have been built or are in course of construction at eleven Church of England schools, eight British and Colliery schools, seven Roman Catholic schools, four Board schools, one Wesleyan school. At the same time only four denominational schools have been discontinued, and thus far, therefore, the Board system has not in any way been detrimental to voluntary effort. In fact it has had a stimulating effect in several instances, and those most opposed to the Act of 1870 are fast coming to see that their dreaded foe is after all but an honourable rival. The proposed infants' school in Durham has not yet been commenced, but I believe there will now be no further delay in the matter.

As regards premises, furniture, and apparatus, a great improvement has been effected; and I think I may safely say that, as far as circumstances permit, there is not a badly-ventilated school in my district, though we have not yet reached the ideal of 540 cubic feet per child, as recommended by a Munich professor. I am also engaged in combating the evil of over-crowded class-rooms, which are by no means uncommon, even when the requirements of the Department are fulfilled in the aggregate amount of space and area. In every school, too, there is either a proper lavatory or two or three washhand basins; and I am glad to observe that there are now hardly any galleries for infants which are not fitted with backs to the seats. I much wish, however, that managers would recognise the need of providing chairs or high stools for the teachers, and an adequate supply of hat-pegs for the children. I also hope to see a larger number of pictures both in the senior and junior departments. Of course those of real artistic merit, such as Mr. Ruskin would have, are beyond the means of most schools; but the love of what is beautiful or pathetic can be inculcated without lavish expenditure in these days of cheap engravings and coloured prints.

The offices, though better than they were, are not yet what they should be, and I have still considerable difficulty in getting either managers or teachers to see that they are properly kept; but, where warnings are unheeded, the reduction or loss of the merit grant will doubtless have the desired effect. Apart from the sanitary aspect of the question, the state of these places is undeniably of the utmost importance in regard to habits of cleanliness and decency; and I would, therefore, recommend that two or three of the elder children should act as monitors, and be made responsible for each playground.

### *Plymouth District.*

Mr. H. Cowie writes:—The school supply of the district may be looked on as nearly complete, except as regards Plymouth. According to the calculation of the Plymouth School Board, 1,286 places have to be supplied. This deficiency the Board proposes to make good by enlarging the existing schools in Mount Street and Castle Street, and by building a new school of four departments in Cattedown Road, at the east end of the town. In addition, they also propose at some future time to build a school of three or four departments at the west end. These schools will consist of separate departments for boys and girls over nine, mixed between seven and nine, and infants. This organisation has, I believe, been adopted at Liverpool. Outside Plymouth very few places call for further school supply. A new school is required at Horrbridge, the existing building being in bad repair, and incapable of improvement. At Shaugh Prior there is no school under inspection, although the parish has had a School Board since 1874. The Board has, by a policy of masterly inactivity, contrived to stave off the question of providing efficient schools for nine years, but at last even your Lordships' patience has been exhausted, and a final



notice has been given, which seems to have aroused the Board and the parishioners to the inevitable consequences of their neglect. In a few months I hope to have schools at Shaugh village and Le Moor Clay Works placed under inspection.

Since my last report (1879) several new schools have been added in the Launceston Union, Lezant Board, Broadwoodwider Board (2), and St. Stephen's by Launceston; in Camelford Union, Boscastle Girls' Board and Michaelstow Board. In East Stonehouse new schools for girls and infants have been built during the past year in place of an infant school held in hired premises in East Street. The accommodation at Stonehouse N. and St. Paul's C.E. has been increased. At Launceston both the Board and National schools have been enlarged and separate infant departments formed.

The larger School Boards as a rule do their work well; the buildings are spacious, well arranged, and kept in good repair, the supply of books and apparatus ample, the teachers are well paid, and the staff sufficient. Many of the small country boards, on the other hand, seem to consider that their paramount duty is to keep the school rate at the lowest possible figure. The buildings, sometimes shamefully scamped by some local "jerry-builder," go from bad to worse; the teacher's salary is cut down to the lowest sum that some person who has failed elsewhere is willing to accept; the staff is kept at the minimum, and the inspector's requirements as regards staff, books, maps, &c., are resisted or evaded up to the last moment, and then complied with only to escape the threatened fine. When we consider that farmers as a class have no interest in or experience of the management of schools, that they commonly regard popular education as injurious to their interests, and that they have to bear a new burden in the school rate for an object with which they have no sympathy, we cannot wonder that the results of committing the charge of education to this class should prove unsatisfactory.

#### *Manchester District.*

Mr. H. E. Oakley writes:—There is accommodation for about 117,000 children, which is more than one-sixth of the population. The statement of gross accommodation is, however, misleading when it deals with a large area, for there may be on the whole more than sufficient provision for all the children, and yet a deficiency here and there. Thus, in Manchester at least, 15,000 people have within a few years moved from the centre of the city to the suburbs, in consequence of the improvements which have uprooted many squalid streets and cellars, with the natural result that one at least of some large schools is rendered practically unnecessary, whilst on the other hand additional accommodation in the outskirts of the town is required. In a report made ten years ago I begged for greater attention to what I think a very important point, the adornment of the schoolroom by flowers, pictures, casts, &c. It is strange that some people think a schoolroom quite good enough if periodically whitewashed and furnished with necessary school appliances. In many parts of a densely-crowded large town the children never see anything beyond four or five hideous streets surrounding their altogether unlovely dwellings. Is it not quite clear that there is a direct and powerful educational advantage in showing them beautiful things in the only place possible—their school? Where some pains have been taken to develop the love of beauty, it is touching to see the children's delight. The committee of the Manchester Art Museum intend to offer to managers of elementary schools small loan collections of good pictures, casts, and pottery, including coloured pictures of common flowers, ferns, trees, birds, and of such pretty places as town children may see on the rare occasion of a country trip. I wish everyone would read an excellent pamphlet by Mr. Horsfall, the originator of the scheme, entitled "Art in large towns," which forcibly shows the importance from many points of view of encouraging among the working classes an interest in beauty and in art, still regarded by many as a plaything for idle people. I have not space to dwell further on this good movement, but I heartily wish the committee every success, and shall be very glad to see their promised loans.

#### *Northumberland District.*

Mr. D. P. Pennethorne writes:—The annual average attendance does not show the state of the schools on some days, as a glance at the highest weekly average will show. It will then be seen how crowded some schools are at certain periods of the year; such schools should be enlarged. An infant school should have a large area to admit of marching and other exercises. It is true that infants take up but little space, so that eight square feet means more for them than for older children; but in passing a school in respect of premises regard should be had to the area in front of the gallery, so that rooms fit only for infants' class-rooms should not be passed as infants' schools.

#### *Leeds District.*

Mr. A. G. Legard writes:—When the new buildings, which are already in hand or projected, are completed there will be forty-two permanent schools within the borough with accommodation for about 32,000 children; and if the extra schools be taken into

account, the total accommodation in Board schools will be sufficient for about 33,700 children. The number of voluntary schools in Leeds remains much the same as it was ten years ago, nor is it likely to increase. There are at present fifty-four of these schools with accommodation for about 16,700. Accordingly it may roughly be said that the Board provides school places for two-thirds of those who require it, while voluntary managers supply places for the remaining one-third.

It must be admitted on all sides that considerable energy has been shown by each of our Boards in succession in grappling thus successfully with the first problem that awaited solution after the passing of the Act of 1870. The cost has certainly been great, as is apparent when it is noticed that the education rate has risen from 3*d.* to 11*d.*; but our ratepayers may comfort themselves by the assurance that the newer Board schools are not only much better, but, as a rule, much cheaper than the older ones.

The Ellerby Lane Board School, for example, opened in 1877, cost per child 12*l.* 1*s.* 3*d.*, exclusive of the site; whereas the Dewsbury Road Board School, opened in June 1883, cost on the same basis of reckoning 8*l.* 7*s.* 10*d.* per child. The cost of building has no doubt decreased within these six years, and it has also been the policy of the Board latterly to build schools of four departments where possible—a policy which has promoted efficiency and diminished expense. In the newer schools class-room accommodation is provided for three-fifths instead of two-fifths of the total number of children, and the main room can also be divided into two by a movable partition of glass. On the other hand, in some of the older of the Board schools (Sweet Street, for example) the class-rooms are small and inconvenient. The policy of increasing the number of class-rooms almost necessitates the employment of additional adult teachers, and it is interesting to notice that in 128 departments no less than 247 certificated teachers are employed, and 124 adult teachers not certificated; consequently there is one certificated teacher to 101 children, and one adult teacher to 67 children. In the Church schools there is one certificated teacher to 101 children, in the Wesleyan and British one to 130, in the Roman Catholic schools one to 95. This proportion is not satisfactory, but a further advance in the same direction is most desirable.

#### *City of London.*

The Rev. T. W. Sharpe writes:—It is most desirable that expensive groups of buildings for the accommodation of large numbers should not be built within the boundary of the City, the danger of crossing crowded thoroughfares, the great cost of any site even without a playground, the confined space, and the difficulty of obtaining a quiet locality, present obstacles to the building any large schools within the boundaries; it would, therefore, be more healthy for the children to flow outwards from the City into schools outside the boundaries, and less expensive for the ratepayers. The outskirts of the City, in which most of the children live, could be taken into connection with Westminster on the west, Finsbury on the north, and Tower Hamlets on the east. The City district really requires a certain number of junior schools for children between the ages of three and eight or nine, placed between the great arteries of traffic, so that no young child should be required to cross a dangerous thoroughfare.

I have divided the buildings of the inspected schools into temporary, fair, and good. By temporary I mean buildings temporarily rented pending the acquisition of permanent premises, and by fair, buildings which do not possess a sufficient amount of classroom accommodation, but are otherwise satisfactory. Two only belong to the former category—St. Bride's Infant and the 2nd City of London National, which have been held on the lowest, the second, and third floors of a building of which the first floor was used as a workshop. A sum of 10,000*l.* has been lying in Chancery for the building of one of these schools, and a sufficient sum is provided for the other, but the managers have failed for several years to secure a suitable site. All the other buildings can be regarded only as fair, except the Graystoke Place Board School, which presents the usual excellent features of a Board school, Aldersgate Ward, Lady Holles' Charity, and Bishopsgate Ward Girls' School, *i.e.*, there are really only four good school buildings in the City.

The ward schools present some interesting features; Billingsgate Ward school is held in a house of some pretension, built by a merchant shortly after the great fire; the rooms are sufficiently spacious, but the situation between two lanes, one of which is devoted to the wholesale dealers in oranges and other fruit, and the other to a trade in salt fish, is never very savoury, and is at times unwholesome for young children; but it is on the whole better for the poor children of the neighbourhood to have this place of refuge close to their homes than to have to fight their way through Billingsgate or Tower Street to a more commodious school.

Aldgate Ward school is another harbour of refuge; delightfully quiet rooms sheltered by a courtyard from the noise of the great thoroughfares. The estimation in which the education of girls was formerly held is shown by the comparative size of the boys' and girls' schools, the boys' school accommodates 100 scholars, the girls' school about forty.



*Southwark District.*

Mr. S. N. Stokes writes :—The formation of the School Board for London with power to take sites and money to build upon them was speedily followed by increased supply of school accommodation, and the least skilfully designed of the new buildings excelled in construction and equipment, in elevation and extent, the best of the older institutions. Compared with such dens as the Bermondsey Railway Arch or the Lancaster Street Manger, even such Board schools as Great Hunter Street or Neckinger Road might well be called palaces. Still, fine as the first Board schools appeared by contrast with the hovels previously occupied as schools, experience has shown, as some experts foresaw, that for purposes of instruction and discipline the earliest plans were faulty in important points. The later Board schools exhibit material improvements in plan, and it may not be useless to examine the difference between the two groups so far as to point out features to be avoided in planning schools :—

Schoolrooms should not be passages to other schoolrooms, but every schoolroom should be reached from a corridor.

Schoolrooms should not be designed for a smaller number of scholars than will occupy an adult teacher.

Sufficient cloak-rooms, with doors and fastenings, should be provided, so that articles of clothing may not hang unprotected in passages.

The offices should be external to the schools, not opening on to the staircase or having any interior communication with the schoolrooms, and they should be of adequate extent.

Water or air, heated by a single furnace, cannot be relied on to warm several rooms on different floors.

There should be approaches to the schools from several sides through streets sufficiently wide and quiet.

In the size and arrangement and fittings of offices even the later Board schools leave something to be desired. The fact is, the problem was new. Hundreds of children, many of them too young to attend to themselves, and more of them from homes destitute of conveniences essential to habits of decency and cleanliness, had not before been gathered together into one spot. Hence offices, which as supplementary to home care would suffice for occasional use, become dirty and noisome in the large Board school. The new race of teachers are perhaps less motherly than their predecessors in attention to the little ones, and one male school-keeper cannot cope with the carelessness of 1,000 or 1,500 children—two-thirds of them girls or infants—even if it were possible and proper for him to be always amongst them. The matter has important bearings upon good habits and morals.

*North London District.*

Mr. T. W. Danby writes :—I undertook the charge of this district about the time of my last general report, and found the school supply already settled. In the rural parts of the district not many changes have been made or found necessary since; but in the suburbs of London, in Hornsey, Tottenham, Edmonton, the population grows so rapidly and is so migratory that the questions of supplying school accommodation for the people, and of making the people avail themselves of the accommodation supplied, are only tending towards a settlement. In the extra-suburban area there can be but few children who are not within reasonable distance from some recognised school in which there is room for them.

In the erection and enlargement of schools adequate care and thought are not bestowed on such points as light, warmth, ventilation, arrangement of desks and galleries, position of offices, &c. These are not trivialities, for on them largely depends the efficiency of schools. It, however, becomes obvious to one who visits scores and hundreds of schoolrooms, either that architects and builders consider these things beneath professional notice or that they are ignorant of the rudimentary scientific laws which regulate them. Insufficient warmth, defective ventilation, inconvenient, uncomfortable desks and galleries, introduce unnecessary friction into the working of educational machinery, and make themselves felt in unexpected insufficiency of instruction. Children, especially young ones, become torpid when the schoolroom temperature is too low; and neither they nor their teachers can long work with diligence in an atmosphere charged with the waste products of respiration. If children have to sit in strained attitudes because their writing desks are inconvenient, or because daylight is admitted in a wrong direction, or if they have to maintain a precarious balance on loose forms, with no rest for backs or support for feet, much energy is abstracted from their work, and lassitude and inattention speedily supervene.

Many schoolrooms are so furnished with convertible desks, movable platforms, and the like, that they can be used for lectures and meetings. It is an advantage that the usefulness of the premises should be as great and varied as possible, but it would be well if managers always remembered that the primary use of a schoolroom is for elementary instruction, and that in furnishing such a room the lecture or meeting should not be kept so prominently in view as the school.

**The Duke of Rutland** on Wednesday opened a public recreation ground, of eighteen acres in extent, at the town of Bakewell.

## THE NEWCASTLE LIBRARY.

THE public library in Newcastle-on-Tyne is one of the best in the provinces, and it has the advantage of an excellent catalogue, which is sold to the public for a small sum. The following list will give a notion of the class of books which relate to fine arts, topography, and archæology:—Bewick's works; Bourne's "History of Newcastle;" Bruce's "Lapidarium Septentrionale, Description de l'Égypte, ou Recueil des Observations et des Recherches qui ont été faites en Égypte pendant l'Expédition de l'Armée française, Publié par les ordres de S.M. l'Empereur Napoléon le Grand"—the Duke of Hamilton's copy, specially bound for Beckford by Wright; Domesday Book—the copy of the late Sir Henry Ellis, librarian of the British Museum, with extra pages and MS. notes; Dugdale's "Monasticon;" Grey's "Chorographia, or a Survey of Newcastle"—first edition, Newcastle; Hodgson's "History of Northumberland," a fine copy bound by Riviere; Jones's Alhambra—large paper from the Hamilton Palace collection; McLauchlan's "Eastern Branch of the Watling Street," and McLauchlan's "Roman Wall," privately printed by the Duke of Northumberland; Roberts's "Holy Land, Egypt, and Nubia"—one of the ten copies specially prefaced and each plate hand-coloured by the artist; Schoolcraft's "North American Indians," published by the American Government, and now very scarce in a complete form; Stothard's "Monumental Effigies," Surtees' "History of Durham," and Raine's "North Durham;" Akerman's "Remains of Pagan Saxondom," Allen's "History of the County of York," catalogue of "British Antiquities at Alnwick Castle," edited by Bruce; and "Catalogue of Egyptian Antiquities at Alnwick Castle," edited by Birch; "Archæological Survey of Western India," "Bartolozzi and his Works," Brand's "History and Antiquities of Newcastle," Bruce's "Roman Wall," folio, 1867, only twenty-five copies of which were printed in that particular form for public use; Fergusson and Burgess's "Cave Temples of India," Grose's "Antiquities of England and Wales, Scotland, and Ireland," all large paper; Grüner's "Ornamental Art," "Hogarth's Works," fine edition; Lyson's "Magna Britannica," Penley's "English School of Painting in Water-Colour," "A Collection of Works relating to the River Tyne, from A.D. 1603 to A.D. 1850;" Smith's "British Mezzotint Portraits," Smith's "Catalogue Raisonné," Turner's "Liber Studiorum," Viollet le Duc's "Dictionnaire de l'Architecture française," and "Dictionnaire du Mobilier français."

## SWISS WOOD-CARVING.

AMERICANS, who are always seeking after some new thing, especially if they can turn thereby an honest penny, have lately, writes a correspondent of the *Times*, begun to practise the art of carving in wood, and, rather to the annoyance of zealous Swiss patriots, several wood-carvers of the Bernese Oberland have been persuaded to emigrate to the United States, where they earn, it is said, as much as eight dollars a day—more than they can earn at home in a week. This, turned into francs, sounds a good deal, and is, indeed, an undeniably high wage, eight dollars a day being nearly 10*l.* a week, only a little less than the salary of the President of the Confederation. For all that, the *Berner Post* and other papers of the district are strongly of opinion that the wood-carvers would do much better to stay at home. They say :—"Do not be so selfish as to follow the example of the horologists of the Jura, and establish in America a new trade which will compete with one of our most important local industries. In the United States you will be far away from your native mountains, from the scenes which suggest and the objects which inspire. The only works of art you will see are statues of Washington and Lafayette, and though you may earn more money you will not be half as happy as you are at Brienz and Meyringen and Interlaken. Stay at home, and instead of going to America let the Americans come to you and buy your chalets, your bears, and your chamois, in the land where they are made."

How far these persuasions will be effective remains to be seen, but it is greatly to be feared that the inducement of 40 frs. a day may prove more potent. On the other hand, the attachment of the Swiss to their homes has passed into a proverb, and although some of the watchmakers of the Jura have gone to America, the dearest of them, those who live in the valley of Lake Joux, resolutely refuse to leave their native mountains and abandon their traditional habits for all the inducements that foreign capital can offer. So Americans, when they want fine or complicated watches are still obliged to resort to Switzerland, and an enterprising American horologist, who lately invented a new and elaborate timekeeper, not being able to find in his own country the highly-skilled labour which its production upon a large scale requires, has found it expedient to settle in the Confederation, and manufacture there the wares which he sells in the States.

Swiss wood-carving is a much younger industry than Swiss watchmaking. It was introduced into the Bernese Oberland some fifty years ago by Christian Fischer, a self-taught peasant-artist of



Brienzi. But he was more peasant than artist, detested working indoors, and his ambition did not extend beyond carving rings for table napkins, cutting wooden egg-cups, and adorning them with flowers. He was also a musician and village bone-setter, and altogether a man of versatile genius. But his great merit was being the creator of a new industry, for though Fischer did no great doings himself, he put into practice a valuable idea, and founded a school. It is hardly necessary to say that he died in poverty. Inventive geniuses, unless they have business capacity, generally do die in poverty. Peter Baumann, of Grindelwald, and a man named Flenz, belonging to the same country, improving on Fischer's idea, began the making of those charming Swiss chalets, now so popular, and which it is now almost *de rigueur* for tourists in Switzerland to purchase. What was more natural than for these peasant-artists to model, first of all their own picturesque houses with their overhanging roofs, their quaint galleries, their painted ornaments and carved figures, brown with age, standing on a plinth of white stone, overshadowed with trees, within sound of a rushing torrent, and sheltered from avalanches and the north wind by the rocky rampart of some Alpine height?

Peter Baumann, who seems to have been more thrifty and steadfast than his predecessor, settled at Meyringen and taught his art to his three sons, one of whom, Andreas, became the *facile princeps* of wood-carving. His work is deemed unapproachable, and his bouquets of roses still serve as models for aspiring sculptors. The success and celebrity acquired by the Baumanns caused the industry to spread, and wood-carving soon became the winter occupation of every householder in the vale of Hasli. But there was no regular market for their productions, their only customers were casual visitors, their only agents hotel porters and small shopkeepers, who took the lion's share of the profits. The trade wanted organising, in fact, and, after several tentative efforts in this direction, the Brothers Wirth established their extensive workshops, where several hundred sculptors of the Oberland now find regular employment. In this industry, as in almost every other, the best results are obtained by a division of labour. Every carver has his or her speciality. Some prefer to shape groups of animals, others like better plants and flowers, others again take to building miniature chalets, and making curious caskets, and what they like the best is generally the best done. Elaborate artistic furniture is also made in great variety in the establishment of the Brothers Wirth. In 1862 the industry had become so important that the Cantonal Government deemed it expedient to found a school of design at Brienzi, which is maintained by the State, the communes, and the fees of pupils, the last, however, being little more than nominal. In 1869 a master modeller, maintained in like manner, was appointed for the instruction of the carvers of Interlaken. The pay of a sculptor varies from two francs a day for beginners to five francs for the more expert, among whom is a large proportion of women, their natural tastefulness and deftness of touch making them formidable rivals to the men. Brienzi is the headquarters and chief mart of the trade, which has entirely changed the character of the town, and gives it an appearance of prosperity that in former years was conspicuous by its absence. The number of male and female sculptors employed at Meyringen and Brienzi amounts to 2,500, and their industry brings into the district some two million francs a year.

Successful enterprise is always a healthy and stimulating influence, and the success of wood-carving at Brienzi suggested the idea of making parqueterie and chalets at Interlaken. The former has already grown into a large business, the annual production of one establishment alone amounting to nearly 700,000 square feet of parqueterie, valued at half a million francs. Chalets are made for use, not for show, in parts, and, the parts being numbered and arranged to fit without trouble, a man may order a house by post, have it delivered by rail, and enter into possession, all within a few weeks. Attempts have also been successfully made to turn to account the indigenous stone of the country—variegated marbles, which are found in great variety, as also a soft stone, peculiar to the Oberland, which, while easily worked and susceptible of a high polish, acquires by exposure to the air an adamantine hardness, and has the further quality of being almost indestructible by fire.

## WORKS IN PROGRESS.

**Messrs. J. & R. Morley**, of Wood Street, having decided to take advantage of the system of the General Hydraulic Power Company, have instructed Messrs. R. Waygood to alter their present lift to work from the high-pressure mains, and to erect a new hydraulic lift, to be worked by the same power. The same firm also have in hand a steam-power lift for Messrs. Morley's premises at Leicester, and recently erected hydraulic lifts in their premises at Nottingham.

**Messrs. C. Isler & Co.** have just completed a 126 feet deep artesian bored tube well 4 inches in diameter, at Leicester, obtaining from it a supply of water at the rate of 2,500 gallons per hour. They have completed an artesian bored tube well at Taunton for a brewery, 196 feet deep, 5 inches in diameter, yielding at the rate of

2,000 gallons per hour. Both of these are in the new red sandstone formation.

**Messrs. Archibald Smith & Stevens**, of Janus Works, Queen's Road, Battersea, are erecting at the new Hibernia Wharf (Messrs. Humphrey Bros.) a complete set of hydraulic lifting machinery. This is one of the largest wharves on the south side of London Bridge, and the whole of the machinery is to be worked in connection with the Hydraulic Power Company's mains. The work is now approaching completion.

**Haselbury, near Crewkerne.**—The third bell of this ring has been recast, and the whole of the bells (five) refitted and rehung by Messrs. Llewellyns & James, Bristol. Inscription: "J. A. Caley, M.A., vicar; T. A. Rawlins, H. Hole, churchwardens. Recast A.D. 1884."

## LEGAL.

### Leeds Assizes.

(Before Mr. JUSTICE MANISTY.)

### CHORLEY v. CROSSLEY.—ARCHITECTS' FEES.

This case was one in which the plaintiff, an architect practising in Leeds, sought to recover the sum of 86*l.* 5*s.* 6*d.* balance of account for services rendered in connection with two arbitration cases, in which the plaintiff had appeared in the defendant's behalf. The contention on behalf of the defence was that the charges were excessive, and that they were greater than the plaintiff had agreed to make. After hearing the opening statements and the plaintiff's evidence, and before any other witnesses had been examined, the judge suggested that the plaintiff should accept in settlement of his claim the sum of 50*l.*, in addition to the 29*l.* 10*s.* which the defendant had paid into court. This was agreed to, His Lordship marking his opinion of the weakness of the defence by certifying for all costs against the defendant, including those of a special jury.

## NEW BUILDINGS.

**Canterbury.**—The Sidney Cooper School of Art is undergoing a process of partial reconstruction. The wall which formerly divided the building into two narrow galleries has been removed, and there will be in future a spacious hall, which by the use of curtains may be divided into six classrooms. The contract is being carried out by Messrs. Gentry & Son, the amount of their tender being 693*l.* 10*s.* Mr. J. G. Hall, of Canterbury, is the architect.

**Huddersfield.**—The corner-stone of a school in connection with the United Methodist Free Church, Bentley Street, Lockwood, has been laid. The building, which has been designed by Mr. B. Stocks, architect, Huddersfield, comprises a large assembly hall, with gallery, and classrooms opening on the hall. In addition, there is to be an infants' classroom and a vestry and school-keeper's house.

**Snow Hill Arcade, Birmingham.**—A new arcade connecting Snow Hill and Slaney Street has been commenced. The style adopted is Early Gothic. The frontage to Snow Hill will consist of large shops four storeys high, divided by a bold Gothic arched entrance. The elevation will be of an ornamental character, buff-coloured glazed bricks, Minton's tiles, parti-coloured stone, ornamental red brickwork and terra-cotta, ornamental metal-work, &c., being introduced. The elevation to Slaney Street will be plainer. The shops in the arcade will also be of somewhat plain design, glazed white brick facings, gauged brick arches, moulded brick cornices, bay windows, &c., being introduced. A large enriched centre gable filled in with panellings, ornamented tiles, &c., will emphasise the Snow Hill front. The architect employed is Mr. J. Statham Davis, of Birmingham.

**Hastings Memorial Homes.**—Some houses are being erected at Collinton, near Edinburgh, under the will of the late Marchioness of Bute, which will be used as homes for widows or orphans of British military officers. One of the blocks is about ready for occupation, the second is rapidly advancing to completion, and the third will be ready before the end of the autumn. Each block contains two houses, and each house contains two public rooms, three bedrooms, servants' rooms, and all the other accommodation which is in these days provided in the best finished houses of from 50*l.* to 70*l.* of yearly rental. Consisting of two floors, the houses are designed in the late Mediæval style of cottage architecture, when timber was largely used. The first floor and the chimney-stacks are all constructed of masonry; but the upper floor consists of half-timberwork, filled up with brickwork, cemented on the face. The roofs are covered with red tiles. Each of the blocks is different in design; but in all of them the upper floors, which are partly in the roofs, develop themselves into a number of gables, which are finished in a more or less ornamental manner. The interior of each house corresponds, as regards accommodation, appointments, and finish, with the pleasing aspect



of the exterior. The drawing-room and dining-room on the first floor are spacious apartments, and have been treated in conformity with the style of the architecture, the fireplaces being of massive woodwork finished in a highly-artistic manner. The three bedrooms on the upper floor are hardly less spacious and handsomely treated. The kitchen and the other apartments on the ground floor are spacious and well equipped. Large and well-lighted and well-ventilated bath-rooms, hot and cold water, and the other modern requirements in first-rate dwellings, have been provided. The drainage has been attended to under the direction of the Sanitary Association, and the grounds are to be laid out by the trustees. In situation, style, and cheerfulness of interior, these houses will be regarded by most people with admiration. The outcome of a beneficent spirit, they form a memorial of interest and usefulness. The architect for the houses is Dr. R. Rowand Anderson, of Edinburgh.

### CHURCH BUILDING AND RESTORATION.

**Blyth.**—The foundation of St. Cuthbert's Church has been laid. The site is west of the old building, and, when completed, the two buildings will be within one and the same enclosure. There is no record of the consecration of the old church, consequently the vicar intends to devote it to secular purposes. Only part of the new site is at present being built upon, and the church now in course of erection, which is of stone, and built in the fourteenth-century style of architecture, will, when completed, seat about 370 persons, and will cost 3,000*l.*, nearly the whole of which sum has been raised. Mr. W. S. Hicks, of Moseley Street, Newcastle, is the architect, and Messrs. E. & J. R. Taylor, of Benfield-side, the contractors for the main portion of the work.

**Higher Audley.**—The foundation-stone of a new church in Higher Audley, Blackburn, dedicated to St. Matthew, has been laid. The building is in St. Thomas's parish, which contains nearly 18,000 people. The new church is to cost 7,000*l.* Messrs. W. C. Habershon & Co., London, the architects, have designed a cruciform structure in the Decorated Early Fourteenth Century style. It will have a nave, side aisles, transepts, chancel, organ chamber, and vestries, the internal fittings being of varnished pitch pine, and will accommodate 710 persons.

**Newbury.**—The Congregational church, Northbrook Street, has been reopened after undergoing renovation, which has been carried out under the direction of Mr. Walter H. Bell, architect, by Mr. J. Hopson, contractor. The cost of the work has been about 500*l.*

**Nunnington.**—The ancient parish church of Nunnington, near Helmsley, has been reopened after restoration, carried out under the direction of Mr. Ewan Christian. The chief work of restoration has been the erection of substantial open roofs to chancel and nave, the removal of the ugly, low whitewashed ceilings; the rebuilding of the much-decayed north wall, and also the large vestry and porch; the erection of a chamber for a new organ; opening out and reroofing the tower and restoring the old pinnacles; facing the unfinished west arch of the tower with dressed stone; reflooring and reseating the church—the cumbrous old reading-desk and high box pews having all been banished from the chancel; and the introduction of a new heating apparatus. The contractors for the restoration were Messrs. Langley Brothers, of Hunslet, Leeds.

**Dewsbury.**—The memorial-stones of a Wesleyan Mission chapel in Eastborough, Dewsbury, were laid on Saturday, the 16th inst. The building will accommodate 300 worshippers. The designs and plans are by Mr. F. W. Ridgway, architect, of Dewsbury, under whose supervision the works are being carried out.

### GENERAL.

**Mr. G. S. Aitken, F.S.A. Scot.,** architect of Dundee, has in preparation an illustrated and descriptive work upon the three Scottish abbeys of Arbroath, Balmerino, and Lindores. Measured drawings and views will be given, and the work will cover a field not hitherto occupied.

**Mr. Vincent W. Voisey, F.R.I.B.A.,** has prepared plans for the erection of a parsonage house in connection with St. Matthew's Church, Moorfields, Bristol.

**The Exhibition of Decorative Arts,** which is the third of the series promoted by the Central Union, has been opened in Paris. It is restricted to pottery, and the principal attraction is the division assigned to the Sevres factory. M. Carrier-Belleuse, the present director, has a gallery for his own works.

**The Bristol University College Authorities** have arranged a special course of instruction for students intending to become architects. Among the subjects included are the history of

architecture, and the theory and practice of building. The engineering department also includes special courses for civil, mechanical, and electric engineers or surveyors.

**Herr Maurice Thausing,** the Professor of Art History in the University of Vienna, has been drowned in the Elbe. His principal work is a Life of Albert Dürer, of which a translation was lately published in England.

**Mr. A. B. Brady, C.E.,** has been awarded an honorarium by the Maldon Union Sanitary Authority for his services in connection with the Burnham and Tillingham sewerage works.

**An Exhibition** of pictures and sculpture by French artists will be opened on Monday in the Dudley Gallery.

**The New Museum** in Newcastle-on-Tyne, which was opened on Wednesday, was designed by Messrs. John Wardle & Son.

**The Autumn Exhibition** of the Birmingham Royal Society of Artists will open in the beginning of next month. The private view will take place on September 3.

**Mr. Boehm** has modelled two busts of the late Duke of Albany. One is said to be intended for the Royal Mausoleum at Windsor and the other for Balmoral.

**Mr. T. J. Steel,** of 31 Gracechurch Street, is now in possession of the site on which the Northumberland Avenue Hotel Company have been erecting their intended hotel, having purchased the site and the buildings on it.

**A Tower and Spire** have been added to Holy Trinity Church, Bingley, from the designs of Mr. Norman Shaw, R.A., at a cost of 1,400*l.*

**Clergy and Choir Stalls of Oak** have been introduced into the chancel of St. John's Church, Leamington. They are the work of Messrs. Jones & Willis.

**A Grotto,** from eight to ten metres high, has been discovered in a rock washed by the sea in the Morbihan by M. Gaillard. He has since continued his researches at low water, and found some human bones, ancient earthenware marked with allegorical figures, and coins believed to have been struck by the early Gauls.

**The York Architectural Association** held its closing meeting of the session last week, in the saloon of the Victoria Hall, Goodramgate. In the absence of Mr. W. G. Penty, president, Mr. Wm. Brown occupied the chair. The following officers were elected to serve on the executive for the ensuing session:—President, Mr. A. Pollard; vice-presidents, Mr. W. G. Penty and Mr. Wm. Hepper; hon. treasurer, Mr. Norman R. Yeomans; hon. secretary, Mr. B. Priestly Shires; committee, Mr. J. N. Braithwaite, Mr. H. C. Crummack, Mr. Geo. Benson, Mr. G. J. Monson, C.E., A.M.I.C.E., and Mr. W. H. Smithson. Votes of thanks were unanimously passed to the retiring committee and to the chairman for presiding.

**The King of Bavaria** has increased the list of his already numerous mountain palaces and castles by the purchase of the ruined castle of Falkenstein, situated on a steep mountain cliff near Weissbach, on the Tyrolese frontier. It is intended to rebuild the place, remodelling it to suit modern ideas of a pleasant royal hunting seat. As a preparatory step, a large body of labourers and artificers is employed making a carriage road which shall give an easy access to the eyrie where Falkenstein is perched.

**A Welsh Church Commission** has recommended the erection of ten new churches and several mission chapels in the deanery of East Gower, Glamorganshire. In most of the cases sites have been given or promised.

**The Roman Catholic Church** built by the Marquis of Bute at Old Cumnock, Ayrshire, has recently been fitted throughout with the electric light. There are in all about seventy glow-lamps of twenty candles each.

**A Harbour** is to be constructed on the Lincolnshire coast at Sutton-le-Marsh. The works, which will be under the superintendence of Sir John Coode, will consist of an outer harbour of 14 acres, leading by a lock of 50 feet in width to an inner dock of nearly 10 acres in extent. The outer harbour will be protected by a north and south pier, respectively 517 and 418 yards in length, with a lighthouse on the former, and an entrance on the latter one, which is the most sheltered.

**A Door Spring** has been invented in America which breaks the force of the shutting blow by connecting the spring to the piston-rod of a small air cylinder, so that the momentum of the door compressing the air in this cylinder checks the motion of the piston by an elastic resistance, which is removed after a moment by the gradual escape of the air through an opening too small to allow its sudden liberation; but, when released, allows the spring to close the door with a firm push over a distance of two or three inches.

**The American Elevator Company,** of 38 Old Jewry, London, have received the contract for a first-class "Standard" hydraulic passenger-lift, to be placed in the residence of Mr. Burns, 69 Brook Street, W. This will be of similar pattern to those which are in general use in the United States for private houses.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, AUGUST 23, 1884.

### COMPETITIONS OPEN.

**BIDEFORD.**—Sept. 22.—The Trustees of the Bideford Bridge Trust invite Competitive Designs for the Erection of a Block of Buildings suitable for a Post Office on site of Premises in High Street. Premiums of 20*l.* and 10*l.* The cost of carrying out any of the Designs not to exceed 800*l.*

**BOMBAY.**—Nov. 6.—The Municipal Commissioner of Bombay invites Designs and Estimates for a New Municipal Hall and Offices, which must be sent to his Office by Twelve noon, on Nov. 6. A Premium of 5,000 rs. will be given for the Design most approved of by the Commissioner, with the assistance of a Committee of the Corporation; 3,000 rs. for the second, and 2,000 rs. for the third. The total cost of the buildings is not to exceed 5 lacs (5,00,000 rs.). Mr. E. C. K. Ollivant, Municipal Commissioner's Office, Bombay, or at Messrs. E. W. & R. Oliver, 1 Corbet Court, Gracechurch Street, London.

**REDRUTH (CORNWALL).**—Sept. 13.—*School.*—The Redruth School Board offer a Premium of 25*l.* for the best Plans (Elevation and Detailed Drawings), to be selected by themselves, for a School, to be erected at Trewrigie, Redruth, to accommodate 700 Children (350 Boys and 350 Girls and Infants). Total cost not to exceed 3,500*l.* Mr. Charles Bawden, Clerk, Heanton Place, Redruth.

**STOCKPORT.**—Oct. 1.—Designs are invited for Public Baths. Premiums of £50, £30, and £20. Mr. Walter Hyde, Town Clerk, Stockport.

### CONTRACTS OPEN.

**BATLEY.**—Aug. 30.—For a Warehouse in Tichborne Street, Staincliffe, Batley. Mr. J. T. Law, 64 Commercial Street, Batley, Architect.

**BIRMINGHAM.**—Aug. 28.—For Erection of Kitchen and other Buildings at the Workhouse. Mr. W. H. Ward, Architect, Paradise Street, Birmingham.

**BLACKBURN.**—For Building St. Barnabas' Church, Addison Street. Mr. William S. Varley, Architect, 15 Richmond Terrace, Blackburn.

**BRIDFORD.**—Aug. 23.—For Erection of Brick Chimney and Buildings, Fair Ground. Mr. J. H. Cox, Borough Surveyor, Town Hall, Bradford.

**BRIDPORT HARBOUR.**—Sept. 2.—For Building Ten Houses. Messrs. Prior & Alexander, Architects, 17 Southampton Street, Bloomsbury Square, W.C.

**CLAINES.**—Sept. 4.—For Construction of Pipe Sewers, Manholes, Receiving Tank, Engine House, Filter Beds, Roads, Fences, and Works in connection with the Sewerage Scheme of the District. Mr. A. H. Parker, Surveyor, 5 Foregate Street, Worcester.

**COLCHESTER.**—For Building Fourteen Cottages. Mr. F. E. Morris, Architect, West Stockwell Street, Colchester.

**CORNWALL.**—Sept. 2.—For Erection of Viaduct in Masonry at Guildford, Hayle, and at Redruth. The Engineer, Paddington Station.

**DARENTH.**—Aug. 25.—For Enlargement of Gasworks at the Asylum for Imbeciles. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

**DEWSBURY.**—Aug. 27.—For Building Model Lodging House, Westgate. Messrs. Smith & Tweedale, Architects, Manor Street, Dewsbury.

**FARNLEY.**—Sept. 2.—For Rebuilding St. Michael's Church. Messrs. Chorley & Connon, Architects, Leeds.

**HEYWOOD.**—Aug. 25.—For Building Fireproof Mill. Messrs. Potts, Pickup & Dixon, Architects, 1 Princess Street, Manchester.

**LEEDS.**—Aug. 27.—For Taking Down and Rebuilding House and Shop. Mr. Abraham Wood, Architect, Menston, Wharfedale.

**LETTERKENNY.**—Sept. 1.—For Additions to District Lunatic Asylum. Mr. Morley, Building Surveyor, Commercial Buildings, Dublin.

**LINCHMERE.**—Aug. 30.—For Building Board School and Teacher's Residence. Mr. Edward Eames, Surveyor, Linch, near Midhurst.

**LINCOLN.**—Aug. 25.—For Excavation, Sewering, Constructing Manholes, Ventilators, and Gullies, Fixing Kerbs, Forming Carriage Ways, &c., in Extension of West Parade from Orchard Street to Hungate. Mr. R. A. Mac Brair, City Surveyor, Lincoln.

**LOCHMADDY.**—Aug. 30.—For Additions to Hotel. Messrs. Kinnear & Peddie, Architects, 8 St. Charlotte Street, Edinburgh.

**LOW SEATON.**—Aug. 23.—For Building Good Templars' Hall. Mr. G. D. Oliver, Architect, 41 Pow Street, Worthington.

**NELSON.**—Aug. 26.—For Building Weaving Shed and Premises. Mr. Thomas Bell, Architect, 14 Grimshawe Street, Burnley.

**REPTON.**—Aug. 26.—For Building School and Classrooms. Mr. B. Scott Currey, Derby.

**ROCHDALE.**—Sept. 1.—For Additions to Chapel. Mr. Benjamin Heape, 7 Baillie Street, Rochdale.

**SEAHAM HARBOUR.**—Aug. 30.—For Building Co-operative Store, Manager's House, and other Buildings. Mr. George R. Forster, Architect, Seaham Harbour.

**SHEPTON MALLET.**—Aug. 30.—For Building Sexey's County School at Douling. Mr. G. J. Skipper, Architect, Ople Street, Norwich.

**SNATH.**—Aug. 25.—For Strengthening Roof and other Work at Wesleyan Chapel. Mr. W. Watson, Architect, Barstow Square, Wakefield.

**SOUTH SHIELDS.**—Sept. 1.—For Erection of Dwarf Wall with Iron Palisading and Gardener's House, at the Lawe. The Borough Engineer, Chapter Row, South Shields.

**SPEN COLLIERY.**—Aug. 25.—For Building Chapel. Mr. Thomas Southron, Architect, 70 King Street, South Shields.

**STRATFORD.**—For Building Nine Houses, Cedar Road. Mr. W. Bigg, 287A East India Road, Poplar, E.

**SUNDERLAND.**—Sept. 1.—For Building Methodist Schools, Chester Road. Mr. Joseph Shields, Architect, Blackett's Buildings, Sunderland.

**TODMORDEN.**—Sept. 26.—For Construction of Reservoir, Ramsden Clough. Mr. James Farrar, C.E., Market Street, Bury.

**TUNSTALL, NEAR ACLE.**—Sept. 3.—For Building Stable, Wagon Lodge, Piggeries, &c., Church Farm. Mr. Arthur J. Lacey, Architect, Orford Hill, Norwich.

**WALSALL.**—Aug. 23.—For Erection of Farm Buildings, Brockhurst Farm, for the Corporation. Mr. Samuel Wilkinson, Architect, Town Clerk, Bridge Street, Walsall.

**WILSDEN.**—Aug. 25.—For Building Mill, Shed, Offices, Engine and Boiler Houses, Chimney, &c. Mr. Wilson Bailey, Architect, 9 Market Street, Bradford.

**WIMBLEDON.**—Aug. 26.—For Building Press House, Cake Shed, and Plant for Treatment of Sewage Sludge. Mr. W. H. Whitfield, Local Board Offices, Broadway, Wimbledon.

**WORKINGTON.**—Aug. 29.—For Additions to Camerton School. Mr. George Watson, Architect, 3 St. Andrew's Place, Penrith.

### TENDERS.

#### BIRMINGHAM.

For Erection of Kitchen, and other Buildings, at the Workhouse, Birmingham. Mr. W. H. Ward, Architect, Paradise Street, Birmingham.

Bates, Birmingham	£1,860 10 0
W. & J. Webb, Birmingham	1,823 0 0
Horsley Bros., Birmingham	1,750 0 0
Bennett, Birmingham	1,683 0 0
Davis Bros., Birmingham	1,669 0 0
Webb, Hockley	1,650 0 0
Hancox, King's Heath	1,620 0 0
Gazy, Birmingham	1,561 0 0
Robinson, Birmingham	1,530 0 0
GOWING & INGRAM, Birmingham (accepted)	1,443 10 0

#### BATLEY.

For a Dwelling-house in Dark Lane, Batley, for Mr. James Coulter, Ironfounder. Mr. J. T. LAW, Architect, 64 Commercial Street, Batley.

Masons (labour only).	
Baines, Batley	£138 0 0
Robinson, Batley	135 0 0
North, Batley	134 0 0
HEPWORTH, Batley (accepted)	132 0 0
Goldthorpe, Batley	128 10 0

Joiners.	
Chadwick & Sons, Staincliffe	215 0 0
Lykes & Smith, Batley Carr	172 0 0
North, Batley	168 0 0
Armitage & Son, Batley Carr	166 0 0
Illingworth, White Lee	160 13 0
Kaye & Scales, Batley	160 0 0
Charlesworth, Batley	159 3 0
Field, Batley	156 13 0
Garthwaite & Blackburn, Dewsbury	155 0 0
Brooke & Sons, Ossett	150 10 0
Fozard, Batley	150 0 0
Brown, Gomersal	147 0 0
BROOKE, Batley (accepted)	146 15 0
Marsden, Dewsbury	146 0 0
Jackson & Day, Hanging Heaton	128 8 0

Slaters.	
Watson, Worsnop & Co., Leeds	25 12 0
Thompson, Dewsbury	25 10 0
Brear, Dewsbury	24 0 0
Thornton, Heckmondwike	23 18 0
Pickles Bros., Leeds	23 17 0
HARGREAVES, Dewsbury (accepted)	23 10 0

Plumbers and Glaziers.	
Hustwit, Batley	56 1 4
Firth, Batley	43 0 0
Saxton, Batley	42 13 6
Lister, Birstall	38 10 0
Jessop, Batley	27 0 0
Senior, Batley	36 6 0
Brook, Heckmondwike	33 13 0
WALSHAW, Batley (accepted)	33 0 0

Plasterers.	
Broadbent, Dewsbury	34 15 0
Parker, Heckmondwike	30 0 0
Crawshaw, Batley	30 0 0
Morton, Cleckheaton	28 15 0
GRANGE & COOKSOON, Heckmondwike (accepted)	28 0 0
Rothery, Batley	27 10 0
Metcalf & Lockwood, Heckmondwike	27 0 0

#### BLACKBURN.

For Alterations at the Lancashire and Yorkshire Bank, Church Street, Blackburn. Messrs. STONES & GRADWELL, Architects, 10 Richmond Terrace, Blackburn. MARSHALL & DENT, except ironwork (accepted). W. & J. Yates, ironwork.

For Extension of Corn Mill and Erection of Binns, &c., at Daisyfield, Blackburn, for Messrs. Joseph Appleby & Sons. Messrs. STONES & GRADWELL, Architects, 10 Richmond Terrace, Blackburn. All work per Schedule of Prices.

Gregson, Blackburn, excavating and masonry. Cooper, Blackburn, brickwork.

H. & A. Duckworth, Blackburn, one portion, and Stones & Son, remainder, joiner.

Dyson & Son, Blackburn, flagger and slater. Billington, Blackburn, plasterer. Cunliffe, Blackburn, painter.

Lockwood, Manchester, concrete work. Dunkerley & Co., Manchester, and W. & J. Yates, Blackburn, ironwork.

For Erection of Warehouse, &c., in Ainsworth Street, Blackburn, for Messrs. J. B. Stones & Co., wholesale grocers. Messrs. STONES & GRADWELL, Architects, 10 Richmond Terrace, Blackburn. Quantities by the Architects.

Accepted Tenders.	
Duerden, Blackburn, excavator and mason	£230 0 0
Calvert, Blackburn, bricklayer	253 10 0
Craven, Blackburn, joiner and carpenter	314 0 0
Eastwood, Blackburn, flagger and slater	129 10 0
Walsh & Son, Blackburn, plumber and glazier	78 15 0
Billington, Blackburn, plasterer	17 8 0
Pickup, Blackburn, painter	13 0 0
Hindley & Wood, Manchester, concrete floors, &c.	50 0 0
Dunkerley & Co., Manchester, and W. & J. Yates, Blackburn, ironwork (per schedule).	



**BURY.**

For Building Sheds, Corporation Yard, Fernhill, Bury.	
Mr. CARTWRIGHT, Borough Surveyor.	
Sun Mill Company . . . . .	177 0 0
Confort . . . . .	150 12 2
T. & L. Wild . . . . .	148 5 6
BYROM (accepted) . . . . .	142 0 9

**COLCHESTER.**

For Erection of a Villa Residence on the Mersea Road	
(Meyrick Crescent), Colchester, for Mr. J. D. Roff.	
Mr. J. W. START, Architect, Head Street, Colchester.	
Quantities supplied.	
Bowles . . . . .	£125 0 0
Eade . . . . .	525 0 0
Ambrose . . . . .	517 2 9
Diss . . . . .	493 0 0
Shepherd . . . . .	470 0 0
Chambers . . . . .	465 0 0
Dupont . . . . .	456 0 0
OLDRIDGE (accepted) . . . . .	427 0 0

**CORK.**

For Relaying Corn Store, Fish Street, Cork. Mr. W. H.	
HILL, Architect, 15 Marlborough Street, Cork.	
Evans . . . . .	£373 0 0
Longfield . . . . .	300 0 0
Fitzgerald . . . . .	267 0 0
Walsh . . . . .	265 0 0

**CUCKFIELD.**

For Building Cottage, Cuckfield, for Mrs. Scott. Messrs.	
HENRY CARD & SON, Surveyors, Lewes.	
Norman . . . . .	£460 0 0
Finch . . . . .	410 0 0
Knight . . . . .	365 0 0
Hall & Hunnisett . . . . .	361 0 0
Barber . . . . .	360 13 0
PANNETT (accepted) . . . . .	325 0 0

**DARTMOUTH.**

For Reseating Townhall Church, Dartmouth.	
SHIRT (accepted) . . . . .	£187 10 0

**DOVER.**

For Alterations and Improvements at 69 Folkestone Road,	
Dover. Mr. ARTHUR WELLS, Architect, 27 Chancery	
Lane, W.C. (No Competition.)	
LEWIS (accepted) . . . . .	£147 10 0
Hot-water Apparatus.	
Pepper . . . . .	26 0 0

**GLOUCESTER.**

For Laying Pipe Sewer (1,172 yards) and Constructing	
9-inch Brick Culvert (940 yards) with Manholes, &c.,	
and Outfall into Severn, for the South End Drainage,	
Gloucester. Mr. R. READ, City Surveyor.	
Osborne, Bristol . . . . .	£3,125 11 1
Meredith, Gloucester . . . . .	2,941 9 11
Williams, Swansea . . . . .	2,727 10 11
Cowdery & Sons, Newcut . . . . .	2,443 8 11
BEARD, Gloucester (accepted) . . . . .	2,205 9 11
Hilton & Sons, Birmingham . . . . .	2,045 0 0
Surveyor's Estimate . . . . .	2,458 0 0

**HASLINGDEN.**

For Extension to Carr Mill, Haslingden, for Messrs. R. T.	
& H. Greenwood. Messrs. STONES & GRADWELL,	
Architects, Blackburn. All work per schedule of	
prices.	
Tomlinson, Haslingden, all branches except concrete-work.	
Macleod, Manchester, concrete floors and roofs.	

**HUDDERSFIELD.**

For Building Mill Chimney to Woodhouse Mills, Hudders-	
field. Messrs. JOHN KIRK & SONS, Architects, Hudders-	
field.	

ROBINSON (accepted).

For Enlargement of Wesleyan School, by Building	
Five Classrooms, Kitchen, & Offices, Outlane, near	
Huddersfield. Mr. T. L. PATCOTT, Architect,	
Halifax.	

Jagger, Stainland, mason and bricklayer.  
Collins & Hirst, Sowood, carpenter and joiner.  
Goodall, Malsden, plumber and glazier.  
Ecclesby, Lindley, slater and plasterer.

**IRCHESTER.**

For Alterations and Additions to Wesleyan Chapel,	
Irchester, Northants. Mr. ARTHUR WELLS, Archi-	
tect, 27 Chancery Lane, W.C.	
Abbott, Little Harrowden . . . . .	£318 0 0
Underwood, Wellingborough . . . . .	275 0 0
West, Irchester . . . . .	270 0 0
HARDWICK, Irchester (accepted) . . . . .	259 0 0

**LINCOLN.**

For Works at the Cattle Market, Lincoln. Mr. MARSDEN,	
Borough Surveyor.	

Contract No. 1.

Riggall & Hewins, Great Grimsby . . . . .	£187 10 0
Roberts, Oakenshaw . . . . .	170 0 0
GILLOTT & MILLER, Newmarket (accepted) . . . . .	108 0 0

Contract No. 2.

Mawen, Louth . . . . .	173 0 0
TOWLE, Newmarket (accepted) . . . . .	135 10 0

Contract No. 3.

Allen, Louth . . . . .	485 0 0
Edwards, Louth . . . . .	387 0 0
Harrison Bros., Louth . . . . .	350 12 6
Riggall & Hewins . . . . .	325 0 0
Bywater, Louth . . . . .	290 0 0
Roberts . . . . .	253 0 0
HICKLING, Louth (accepted) . . . . .	217 0 0

Contract No. 4.

Bywater . . . . .	26 10 0
CULAM, Louth (accepted) . . . . .	20 15 0

**LIVERPOOL.**

For Additions and Alterations, Bridewell, Prescott Street,	
Liverpool.	
Bostock . . . . .	£2,934 4 0
J. & J. G. Jones . . . . .	2,564 0 0
Desver . . . . .	2,498 0 0
Tomkinson & Co. . . . .	2,350 0 0
Readdle . . . . .	2,260 0 0
Nicholson & Clarke . . . . .	2,235 0 0
Morrison & Sons . . . . .	2,202 0 0
Robson . . . . .	2,200 0 0
Tyson . . . . .	2,200 0 0
Tomkinson & Sons . . . . .	2,197 0 0
Gabbutt . . . . .	2,168 0 0
Brown & Backhouse . . . . .	2,162 0 0
Thornton & Sons . . . . .	2,150 0 0
Raffle & Campbell . . . . .	2,130 0 0
Urmson . . . . .	2,129 0 0
Wood (accepted) . . . . .	2,029 0 0

**LONDON.**

For Rebuilding Warehouse, Charterhouse Square.	
SHURMUR (accepted) . . . . .	£522 0 0
For Alterations, &c. at St. Andrew's Church, Bethnal	
Green. Messrs. DOELMAN & ALLEN, Architects.	
Nightingale . . . . .	£1,160 0 0
Shurmur . . . . .	1,162 0 0
For Building Mortuary for the Strand Vestry.	
Dorrell . . . . .	£1,175 0 0
Sykes & Son . . . . .	1,165 0 0
Love . . . . .	1,045 0 0
Macey . . . . .	1,016 0 0

For Alterations, &c., to the George and Dragon Public-	
house, Hackney Road. Messrs. BIRD & WALTERS,	
Architects.	
Mower . . . . .	£225 10 0
Shurmur . . . . .	222 0 0
Jackson & Todd . . . . .	220 0 0
Anley . . . . .	215 0 0

For Alterations, &c., at the Cripplegate Bank, Whitecross	
Street, E.C. Messrs. WOODTHORPE & HAMMOND,	
Architects.	
Green . . . . .	£814 0 0
Shurmur . . . . .	693 0 0
Heeps . . . . .	640 0 0
Larke . . . . .	614 0 0

For Alterations at the Falcon Public-house, Bedford	
Road, Clapham, S.W., for Mr. Nobes. Mr. H. I.	
NEWTON, Architect, 17 Queen Anne's Gate, S.W.	
Lamble . . . . .	£479 0 0
Royal . . . . .	470 0 0
Burman & Sons . . . . .	430 0 0
Puck Bros. . . . .	428 0 0
COOK (accepted) . . . . .	369 0 0

For Rebuilding No. 16 Mining Lane, E.C., for Mr. C.	
Gasquet. Mr. EDWARD N. CLIFTON, Architect.	
Messrs. WILLIAMS & GRITTEN, Surveyors.	
Ashby & Horner . . . . .	£5,411 0 0
Conder . . . . .	5,288 0 0
Brass . . . . .	5,273 0 0
Holland & Hannen . . . . .	5,216 0 0
Lawrence . . . . .	4,924 0 0
Morter . . . . .	4,687 0 0
Hussey . . . . .	3,800 0 0

For Foundations for the Proposed New Building on the	
Thames Embankment, for the President and Fellows	
of Sion College. Mr. A. W. BLOOMFIELD, M.A., Archi-	
tect. Messrs. Gardiner, Son & Theobald, Surveyors.	

If in Portland	
Cement, add.	
Lovatt . . . . .	£3,404 0 0
Paramor & Son . . . . .	3,400 0 0
Conder . . . . .	3,250 0 0
Greenwood & Son . . . . .	3,249 0 0
Nightingale . . . . .	3,163 0 0
Dove Bros. . . . .	2,795 0 0
Holland & Hannen . . . . .	2,586 0 0
Macey & Sons . . . . .	2,585 0 0
Foster & Dicksee . . . . .	2,250 0 0

For Building Fire Brigade Station, Bishopsgate Street,	
E.C. Mr. G. VULLIAMY, Architect.	
Porter . . . . .	£17,751 0 0
Webster . . . . .	16,098 0 0
Richardson . . . . .	15,800 0 0
Shurmur . . . . .	14,940 0 0
Wood . . . . .	14,434 0 0
Hobbs . . . . .	14,199 0 0
Holliday & Greenwood . . . . .	14,177 0 0
Stevens & Bastow . . . . .	14,000 0 0
Howell & Son . . . . .	13,967 0 0
Garrud & Tinks . . . . .	13,943 0 0
Oldrey . . . . .	13,900 0 0
Reading . . . . .	13,810 0 0
Hook . . . . .	13,504 0 0
Mowlem & Co. . . . .	13,500 0 0
J. & J. Greenwood . . . . .	13,278 0 0
STIMPSON & CO. (accepted) . . . . .	13,210 0 0

For the Erection of the Paragon Theatre of Varieties,	
Mill End Road, E., for Messrs. Crowder & Payne.	
Mr. FRANK MATCHAM, Architect, Ragby Chambers,	
Bedford Row, W.C. Quantities supplied by Mr.	
Frederick Thomson, 20 York Buildings, Adelphi, W.C.	

Reduction if	
zinc is used	
in lieu of	
lead.	
Kirk & Randall . . . . .	£22,680 0 0
Perry & Co. . . . .	22,320 0 0
Wall Bros. . . . .	22,171 0 0
Toms . . . . .	22,000 0 0
Patman & Fotheringham . . . . .	20,150 0 0
Brass . . . . .	20,140 0 0
McCormick & Sons . . . . .	19,987 0 0
Dove Bros. . . . .	19,954 0 0
Morter . . . . .	19,940 0 0
Shurmur . . . . .	19,782 0 0
Roach . . . . .	18,760 0 0
Lusk . . . . .	16,600 0 0
P. & F. J. Wood . . . . .	15,983 0 0
Jackson & Todd . . . . .	14,995 0 0

For Foundations for the Proposed New Building on the	
Thames Embankment, for the President and Fellows	
of Sion College. Mr. A. W. BLOOMFIELD, M.A., Archi-	
tect. Messrs. Gardiner, Son & Theobald, Surveyors.	

If in Portland	
Cement, add.	
Lovatt . . . . .	£3,404 0 0
Paramor & Son . . . . .	3,400 0 0
Conder . . . . .	3,250 0 0
Greenwood & Son . . . . .	3,249 0 0
Nightingale . . . . .	3,163 0 0
Dove Bros. . . . .	2,795 0 0
Holland & Hannen . . . . .	2,586 0 0
Macey & Sons . . . . .	2,585 0 0
Foster & Dicksee . . . . .	2,250 0 0

For Extension of Miskin Schools, Mountain Ash. Mr.	
MOSES CULB, Architect, Pentrebach, Pontypridd.	
Quantities not supplied.	
Edwards, Mountain Ash . . . . .	£971 0 0
Harris, Mountain Ash . . . . .	958 0 0
Williams, Merthyr Tydfil . . . . .	887 15 0
Watkins & Jenkins, Swansea . . . . .	850 0 0
EDMUNDS, Mountain Ash (accepted) . . . . .	850 0 0

For Carpentering in Mill Street Schools, Mountain Ash.	
Evans, Porth . . . . .	£71 0 0
Griffiths, Pontypridd . . . . .	70 7 6
Harris, Mountain Ash . . . . .	67 10 0
JULIEN, Pontypridd (accepted) . . . . .	62 10 0

**NORWICH.**

For Building the Philadelphia Mixed School for the Nor-	
wich School Board. Mr. J. H. BROWN, Archite-	
ct. Quantities by the Architect.	
Wilkin & Wilkin, Norwich . . . . .	£3,239 0 0
Needs, Fakenham . . . . .	3,210 0 0
Downing & Son, Norwich . . . . .	2,889 0 0
Lacey, Norwich . . . . .	2,846 0 0
Hammond, Norwich . . . . .	2,820 0 0
Wegg . . . . .	2,795 0 0
Staines . . . . .	2,750 0 0
YOUNGS & SON (accepted provisionally) . . . . .	2,595 0 0

**OLDHAM.**

For Construction of Reservoirs for the Chadderton Mill	
Company, Oldham.	
BROOKS (accepted).	

For Additions to Newbreak Mill, Oldham.	
Accepted Tenders.	
Schofield & Co., builder.	
Ball & Son, ironwork.	

**PENARTH.**

For Private Improvement Works, Clive Lane, Cogan,	
Penarth.	
SMITH (accepted) . . . . .	£180 0 0

**PLYMOUTH.**

For Chancel and Choir Alterations, Christ Church, Ply-	
mouthe. Mr. JAMES H. KEATS, Architect, Plymouth.	
Pitch Pine . . . . .	
Oak . . . . .	
Choir Stalls . . . . .	
Blowey . . . . .	£150 0 0
Laphorne & Goad . . . . .	143 0 0
Finch . . . . .	128 0 0
Steer . . . . .	125 0 0
Palk . . . . .	120 0 0



ROEHAMPTON.

For the Erection of a New Wing to Mauresa House, Roehampton, Surrey. Mr. FREDK. A. WALTERS, A.R.I.B.A., Architect, 4 Great Queen Street, Westminster. Quantities supplied by Mr. W. H. Brayshaw.

Boyce . . . . .	£5,483	0	0
Carless . . . . .	5,463	0	0
Parmenter . . . . .	5,460	0	0
Shaw . . . . .	5,462	0	0
Sanders . . . . .	4,980	0	0

STAFFORD.

For Construction of Police Cells. WHITTON (accepted) . . . . . £106 0 0

WELLINGBOROUGH.

For Painting, &c., the Workhouse Infirmary, Wellingborough. Mr. E. SHARMAN, Architect.

Tozer . . . . .	£50	0	0
Bellamy . . . . .	29	10	0

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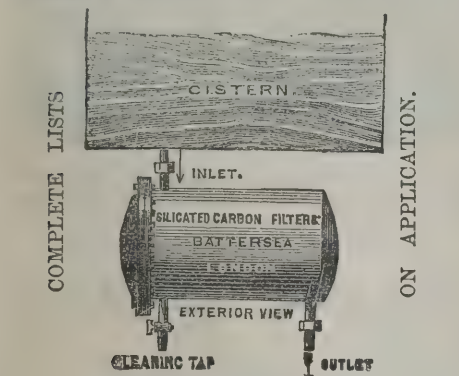
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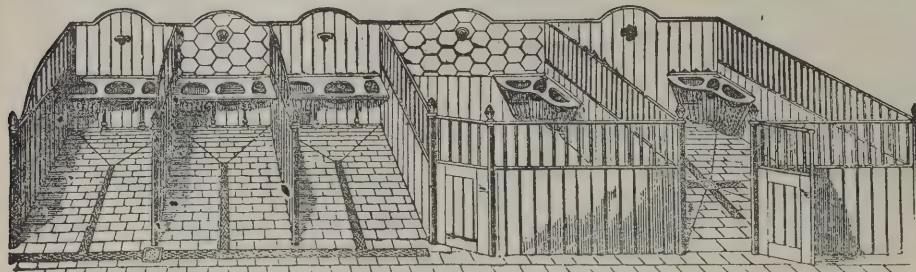
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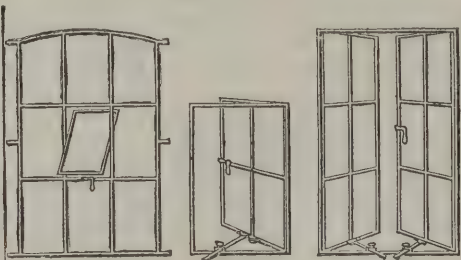
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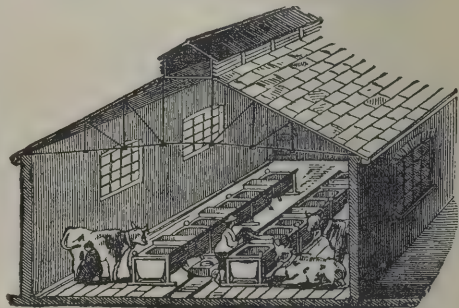
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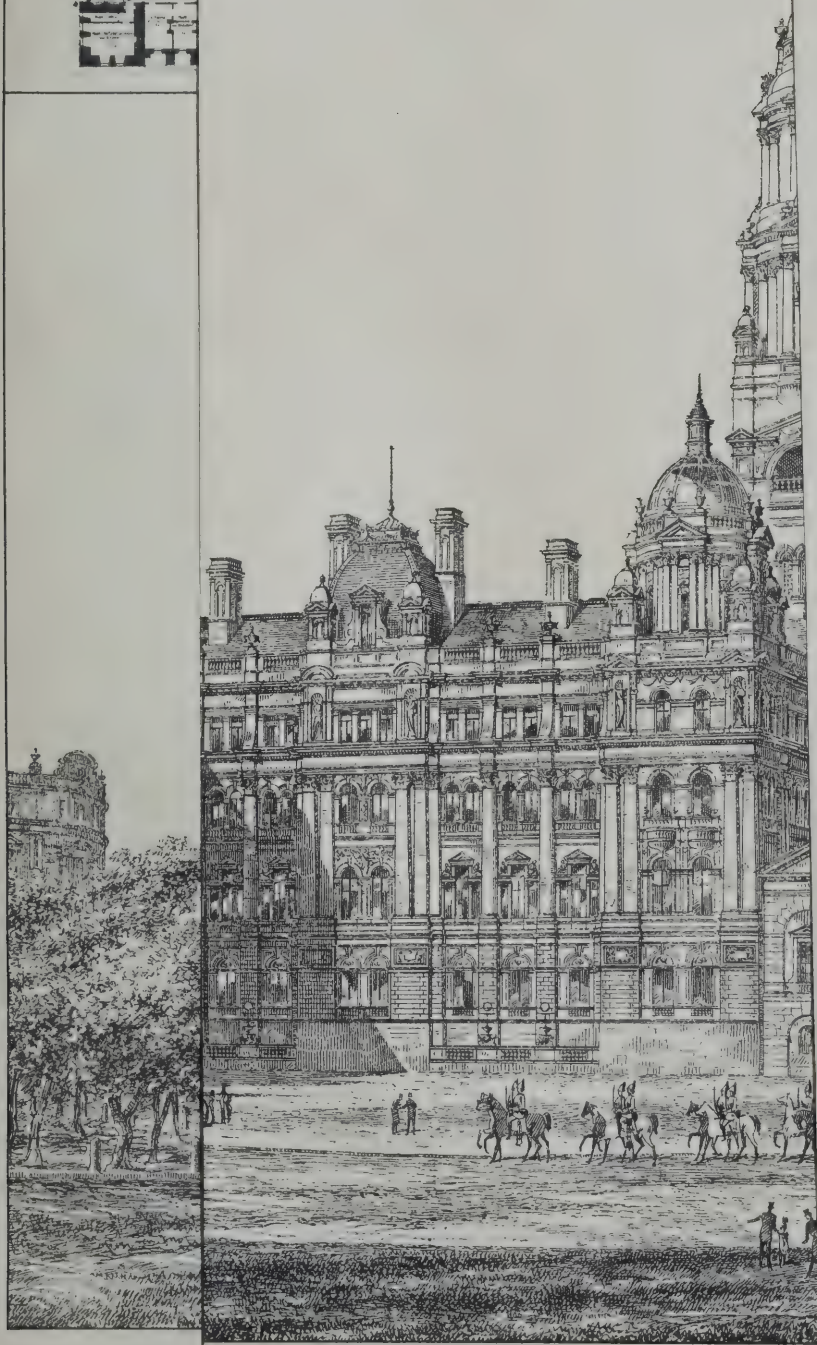
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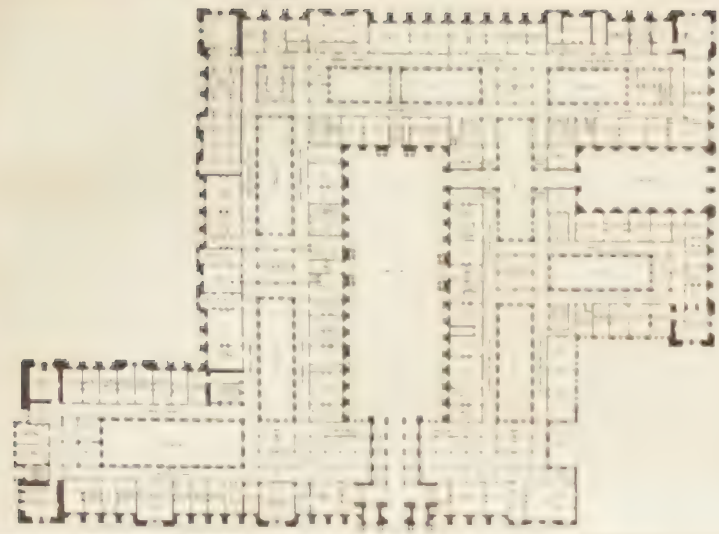
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# The Architect.

## LIVERPOOL CATHEDRAL.



OR some years back the citizens of the important city of Liverpool have been engaged in bringing into form a scheme for building a cathedral, and within the last week or two the first step has at length been taken towards determining the architectural design of the edifice. A general invitation had been issued to architects to send in specimens of their work, by means of which an eminent ecclesiastical practitioner, called in for the purpose, was to select a small number to engage in a competition. As has

been already announced, a very large number of candidates answered this invitation, and Mr. EWAN CHRISTIAN, as the referee, has now made his selection of competitors. Speaking broadly, it may be said that the gentlemen thus chosen are so many High Church Gothic architects. It is intended, therefore, that the new cathedral shall be of academical Mediæval design, of what is considered to be the most advanced type. Those who understand the subject are enabled to anticipate pretty exactly what will be the nature of the result, by recalling to mind what took place in the similar competition which was instituted a few years ago for a so-called cathedral at Edinburgh. Another more recent case, equally instructive, is that of the cathedral of Truro now in process of building. We do not in any way desire to raise an objection to what was done either at Edinburgh or at Truro; but the position of Liverpool socially is so peculiar, that it seems desirable to inquire pointedly what it is that the public of that great city really wish to have. To put the case familiarly, the people of Liverpool may have either a Westminster Abbey or a St. Paul's, and it is for them to choose which they prefer. Up to the present moment it would seem to be settled that it is to be a Westminster Abbey; no one is entitled to say nay to this if the local public say aye; but it may be interesting at any rate to explain that there are two sides to the question.

Conceding to Mediæval ecclesiastical architecture all that can be demanded in acknowledgment of its artistic graces, it can scarcely be denied that much of its interest, if not all, is derived from the existence of appropriate surroundings, or at least congenial associations. The charm which English people at large perceive in the remains of their own antiquity is a very pleasing incident in the national character, and especially in view of the radical change which has come over the mind of the community since the times to which such relics belong. But the virtue of this feeling depends entirely upon its genuineness; the introduction of mere imitation or make-believe, or, to speak plainly, sham, brings down the sentiment to the level of vulgar affectation. Now Liverpool is one of a number of great modern towns which have no Mediæval associations whatever; and, indeed, in connection with such an undertaking as the building of a cathedral, it may be called the chief of these, and the most uncompromising representative of all that belongs to them. We are not suggesting a case of conscience, or creed, or ecclesiastical politics, or anything of the kind; we are dealing with art alone, and the fitness of things artistic; and the question we put is simply this artistic question as one of common sense—Have the people of Liverpool really made up their minds to have for their cathedral an imitation Mediæval abbey church? Of course they cannot have a real one.

A comparison between the City of London, with its essentially modern cathedral in the midst surrounded by WREN'S modern churches, and some old town like York or Chester or Canterbury, pervaded everywhere and dominated everywhere by the crumbling remains of obsolete antiquity, is one which cannot but provoke in these days many a strange reflection. There is something singularly incongruous, in spite of all that romance can say, in seeing the bustle of our commercial life carried on under the gray walls of churches whose age is counted by centuries; and, if the truth may be told, it is when such venerable relics are supported by something like the remains of their own original surroundings, worn-

out old dwellings in grass-grown streets, occupied by people half awake, whose business seems to be a dream, that the holiday-maker can best enjoy the unwonted sense of imperturbable rest, just as some poetic people, for the sake of the peacefulness of it, wish they were dead. To anyone who has ever seen Liverpool, it scarcely requires to be said that the great representative city of modern commerce has nothing at all in common with the solemn passivity which thus accords so well in character with the charms of genuine Gothic building.

The magnificent St. George's Hall, which is the boast of Liverpool, is probably more characteristic of the city in its grand commercial pride than any other edifice in England would be. Many of the citizens might be not a little surprised if they were to be told that there are certain architectural authorities who would infinitely prefer to have had St. George's Hall built in some sort of sham Gothic. We used to be told not very long ago that there was nothing in the whole range of structural beauty and grandeur which could not be better accomplished in such Gothic than in any other mode; and there are many estimable architects in England now who would design St. George's Hall, if not in the manner of the London Law Courts, certainly in the so-called style of Queen Anne as a substitute. But, nevertheless, we may take leave to say of the majestic building of ELMES and COCKERELL, that if ever the right thing was in the right place, that is the right thing in Liverpool. The same may be said, in their degree, of the new Art Gallery and Library, the Exchange, and many other buildings; they are all essentially right because all essentially modern like the city itself. To invite Liverpool to hark back to the Middle Ages, seems to be on the face of it absurd. There are certain sham Gothic façades to be seen, no doubt, in the Liverpool streets; but, especially now when the fashion has gone out, is there anybody to say they are appropriate? The question before us, therefore, is whether a great cathedral church in imitation of the churches of the thirteenth century would be any better suited to the genius of the place. Liverpool people may regret legitimately, if so minded, that their town does not happen to possess, like Chester, a real cathedral of the Middle Ages, upon which they might spend their money freely, as no doubt they would, for the sake of old times; but if they must consequently be content with a brand new cathedral, in fact a nineteenth-century cathedral, are they not entitled to ask why it cannot be made a genuine thing instead of an imitation?

In quoting St. Paul's in London as a familiar alternative, we may be met with the inquiry whether a St. Paul's in Liverpool would not be itself an imitation. The answer is that it would not; and here, indeed, lies the force of the contrast. Between the date of Westminster Abbey and that of St. Paul's, apart altogether from the interval of time, there is, as all the world knows, a great gulf fixed, a social gulf between two distinct civilisations, that of Mediæval Europe and that of Modern Europe. Westminster Abbey and a thousand other genuine Gothic churches throughout Europe were built in the style belonging to their age; St. Paul's and a thousand others since have been built in the style belonging to theirs. Addressing ourselves as we are more to the outside public than to the architectural profession, we find it the less necessary to adduce proofs of a proposition which is self-evident.

There is no need for drawing comparisons between Mediæval art and modern in respect of merit. *De gustibus non est disputandum*. Not a word of disparagement of Gothic design is intended to be even implied in our argument, nor a word of preference for Classic on its own account. But we have now had so much, so very much, of imitation Gothic in our new churches that we may surely venture to hint that, if a fair opportunity for indulging in a change of style were to offer itself, there are many weary minds all over the country which but too gladly would entertain the idea of attempting, if only as an exception, a single Classic example. Is the Liverpool Cathedral, then, or is it not, such a fair opportunity? Liverpool is intensely modern, immensely wealthy, entirely commercial; as the seat of a new bishopric it stands alone, or is to be associated with only one other; when it desires to build a cathedral, it is altogether on its own social ground; and if architecture, even in a cathedral, ought to tell the story of its own time, the simple question is—How shall this rule be applied to Liverpool by Liverpool?

It is not at all unlikely that some of the eminent ecclesiastical architects whom Mr. CHRISTIAN has selected as competitors will be found to go a good deal farther than the



Liverpool people expect in the exercise of a natural academical desire to produce a thoroughly high-class and perfect project. Not only may the church itself be modelled on the most inappropriately and even inconveniently monumental lines that can be discovered in Mediæval authenticity, but we may have attached to it, for instance, a whole conventual establishment—cloisters for the meditation of the clergy, and a cloister garth for their burial; sacristy and almonry; refectory, buttery, and dormitory, if not for the clergy, for the white-robed choristers; and an abbot's lodging for the dean, which he would certainly decline to live in. We do not say this disrespectfully at all, but would rather ask whether the addition of all these counterfeits would not be perfectly rational, and indeed commendable, in designing a counterfeit abbey church of the thirteenth century. On the other hand, if what the people of Liverpool really want is a grand monumental church worthy of the dignity of their great commercial city at the close of this nineteenth century, might it not be infinitely more appropriate to the occasion to forego altogether the questionable satisfaction of imitating the models of wholly different times, and try what can be done in the natural manner of their own business and their own age?

### ENGLISH RENAISSANCE ART AS SHOWN IN THE PUBLIC OFFICES' DESIGNS.

[BY A CORRESPONDENT.]

THE designs in the Government Offices' competition may fairly be held to represent with tolerable exactness the position of Renaissance architecture in Great Britain at the present day. Out of nine designs for this prominent public building, eight are in this style, and the authors of the ninth have sent a most picturesque sketch of a translation of their Gothic elevation into a transitional form of Renaissance. The process of selection by which the architects who competed have been chosen may no doubt have shut out many able and original artists, but still those who have been included may be considered as representative of the profession as regards architectural style. Without attempting in every case to point out our remarks by reference to individual designs, we propose briefly to consider at what level the English knowledge and practice of that phase of modern architecture which originated in Italy in the fifteenth century appears to stand, judging from the collection of drawings now open at Spring Gardens.

In matters of fine art we have certainly not yet bridged the Channel. Our painters are but little influenced by that development of their art which has been produced by the exertions of contemporary artists of the French school, and the same thing may be said of our architecture. The influence of INIGO JONES, WREN, HAWKSMOOR, and CHAMBERS is more traceable at Spring Gardens than that of the powerful and highly-cultivated group of modern architects who have recast Paris within the last half-century. No trace, or but few traces of neo-Grec can be detected, and this perhaps is the more remarkable as the completion of that very conspicuous public building, the details of which are much influenced by modern French art, which has been for years in progress in Belgium, has lately attracted public notice. We might have expected that the competitors would—some of them at least—have been tempted to take the Palace of Justice at Brussels as a model. Finer even than French work, but less known, is the architecture of the Renaissance school in Germany and Austria. Yet though Vienna and Berlin offer a remarkable series of great works, they do not seem, so far as their features are distinctive, to have suggested much to our English designers.

Under such circumstances as these individuality at least is to be expected, but with it local or national defects are liable to be preserved, and this has been the case in the competition designs. A great deal of modern architectural work in England has failed to rise above the level of commonplace mediocrity; it is often incorrect, or, if free from blemishes, devoid of interest; and accordingly in several of the elevations exhibited we find but a low level of excellence is reached. For features which in themselves are not strikingly beautiful, and which have become hackneyed by their constant use in buildings of little or no importance, others should be substituted which are more refined or less familiar, if a composition is to be worthy of the dignity of a great public work; but, in several instances hardly any attempt has been made to do this. We could point

out windows, bays, arches, &c., which are the very counterpart of what is in use in Belgravia and Tyburnia; introduced where a little more thought and a more thorough mastery of the resources of the style would have led to the employment of something better, to the infinite advantage of the design. If on the one hand much of the work is too commonplace, on the other hand some of it displays a second English fault. It is too free. There are portions of designs not lacking in spirit and power of composition, where ornamental features and enrichments can be detected which are altogether too wild and fantastic, or else too careless and unstudied for the purpose of the building and the requirements of the site. We ought however in fairness to add that there are other designs in which the features are not as a rule hackneyed, and in which the dignity of the subject is well preserved, though in none is there an extraordinary command of the resources available for use in a monumental building.

One of the greatest difficulties which a designer has to encounter who arranges a Renaissance building for English use is the necessity for introducing ample light. In designs where fenestration is more relied on than the use of the Orders, it is absolutely essential, if the building is to be dignified, that the unpierced wall space should be considerable, and that its value should be emphasised. BARRY showed how to do this in his Pall Mall club-houses, but his example has not, at least to any great extent, influenced those competitors whose choice has fallen on what may be termed a fenestrated style.

English buildings of the seventeenth century were remarkable for the possession of certain good qualities, which have descended, as we are glad to recognise, to the present day. If WREN and VANBRUGH were deficient in their detail, they managed to impart to their work a degree of flexibility which is often wanting in the public buildings out of England erected at the same period, and they paid scrupulous attention to the sky-line. WREN's genius was never so well displayed as in his varied church towers and spires and in his glorious dome, which have bestowed upon the metropolis of England an architectural character eminently its own, and in those parts of the plan and the design which tend to give light and shade, variety and life to a building. In both these respects some at least of the competitive designs are remarkably successful. Messrs. ASTON WEBB & BELL stand highest in their treatment of sky-line, the more so as they have so disposed their plan that nearly the whole of their richly varied outline grows naturally out of the disposition of the masses of the work, and could not be affected by any such fit of parsimonious eccentricity as has cut off from SCOTT's Colonial Office the only features with which he intended to break the flat outline of his Whitehall front. In Messrs. VERITY & HUNT's design, the absence of high roofs and of a good and telling sky-line is a most unfortunate deficiency, and has been no doubt a main obstacle in the way of their success. Messrs. LEEMING have used features that will tell against the sky with considerable success, and their tower is one worthy to stand in the same city as those of WREN; but we think it is to be regretted that they have not ventured frankly upon the use of visible roofs, steep in pitch and highly enriched. These features, which are a recognised element of Renaissance design, impart life to the building, and do it in a very natural manner; nor is it to be overlooked in a country where such men as Mr. AYRTON sometimes bear rule over matters of taste, that it is less easy to omit them than it is to cut off the tops of towers.

What we have called flexibility is the good quality which we think is best illustrated by the designs sent in, and it is probably the most peculiarly English. The habit of designing chiefly in Pointed styles has given our architects at the present day a feeling of command over the masses of their buildings, and of familiarity with the value of balance as compared with absolute symmetry, which emancipates them to some extent from the trammels which the regularity of Classic design is apt to throw round the architect. Several of the designs show that their authors are well able to deal with the difficult problems involved almost of necessity in the Whitehall front of the building. Here the principal entrance cannot without difficulty be a central one, and the exigencies of site demand an unsymmetrical treatment. Several competitors have adopted the excellent expedient of throwing back part of their building and forming a half quadrangle, or large recess, next Whitehall, and have shown great skill in dealing with this feature. Messrs. LEEMING have not taken this course, but have occupied the whole length of this Whitehall frontage with a



comparatively unbroken mass of buildings ; but they have had the courage to divide this mass unsymmetrically, and, in our judgment, great skill is shown by the manner in which the rhythmical harmony due to equal spacing of openings and columns is kept up, while the irregularity already referred to is just enough accentuated to divide the front into two portions, continuous and connected, but to a great extent distinct. Indeed, we are disposed to esteem this as the most original and meritorious piece of handling in the whole design. In respect of flexibility, however, as well as in the good treatment of sky-line, the design of Messrs. WEBB & BELL is superior to that of any competitor.

It is interesting to note the fact that Renaissance has been selected by all but one of the competitors. Of course the influence of the site and surroundings points to it as desirable, but in the great Foreign Office competition for buildings to stand in the same neighbourhood there were a considerable number of good Gothic designs, and for the Law Courts there was nothing but Gothic. This circumstance points significantly and clearly to the fact that a great change in public taste is taking place ; and if there be any other deduction to be drawn from the considerations we have brought forward, it would seem to be the necessity of keeping abreast of the architects of France, Belgium, and Germany in their development of a style towards which public favour is turning, or perhaps we ought to say, returning.

### ON THE HILLS: A LANDSCAPE GOSSIP.

[BY A PAINTER.]

NINE hours from London, two miles uphill from the sea and the little watering-place, no carriage road within sight, and wandering tourists almost as rare as though they were angelic—so abrupt is the change of scene that at first a kind of mental giddiness seems to take hold of one. Instead of the dull roar that the myriad and hoarse-voiced city sends up all day and half night long, broken into hideous and aggressive nearer dissonance by hand organs, itinerant vendors, the neighbour's piano, the children from the mews, tradesmen's carts and visitors' carriages, what sounds break the stillness of the summer day here upon the hillside? There is the plashing of the clear stream that comes down from above, leaping fresh and clear over stone and turf as it hurries past the house, best and sweetest of fountains for man and beast. There are cheery sounds of farm life. In the morning, before the heat of the day, the cattle are driven up the hill, the poultry are fed and go clucking about, the very pigs grunt amiably. All through the afternoon into the evening you may hear the mowers as they walk one behind the other, cutting the lush grass in the meadows below. All about on the hills the bees are tuning their orchestra of tiny pipes over the gold and purple of gorse and heather ; the sheep bleat plaintively, and move by twos and threes into the strips of shade beneath the big limestone boulders. At evening shadow and coolness fall upon our slopes, the cows come down to be milked and stand about the stream lowing, the mown grass is brought up and added to the big stack that smells so sweet at nightfall. Then, as the hours go by, all sounds fall away little by little. Work is done and the lights are out, the hills loom high and mysterious, the mountain forms in face of us are dark and solemn, the air is so still that you hear the break of the tide upon the sands far below, and the continuous plash of the little stream that may not rest even beneath the stars. Nothing is so strange to a Londoner as the hush of night upon the hills, strange even to dread until he learns to lose the wonder and only to feel the peace of it.

Change of sound is one reason, then, for that mental giddiness I spoke of ; change of scene is yet at first more reversing of equilibrium. It is not immediately that the mind adjusts itself to intimacy with mountain and valley under the shifting splendours of cloud and sunshine ; the long-drawn horizon of the summer sea ; the vision of sunset upon distant crags ; the mystery of moonlight on the hills. It may be all very well for the modern sensational landscapist to content himself with an "impression," of which he is pleased to impart a second-hand version by aid of pigment and palette-knife ; with a true artist an impression will really be the last outcome, and, as it were, a fugitive combination of many and subtle antecedents of observation and perception. The actual vision may

be almost momentary, but thought is quick past counting, and enriches the moment's glance with unconscious detail gathered before. We all know how TURNER used to sit down before a scene by the hour and take it into his mental storehouse before he ever put brush to paper. And what I am driving at now is the point that a painter, be it with brush or pen, with colour or words, cannot truly perceive, and therefore cannot truly represent, the character and beauty of any scenery until he has shaken off the husks of the town life he has left behind him, and by slow degrees has drawn into his mind—has, as it were, assimilated—the beauty and the character of the scene with his art nature. It takes some time to learn to see in the full sense, which includes mental and bodily vision. If you tear down from London or Birmingham, or any of the manufacturing towns of the north, and next morning set up your easel amid the heather and the bracken and think you are going to make a faithful portrait of Cader Idris yonder, where he lifts his head, furrowed with many a winter storm, above the surrounding hills, you are very much mistaken. There will be a great deal of paint, and we shall all know what mountain you meant to portray if your outline is pretty true. But as for any worth in your work, the famous portraits of the PRIMROSE family were not further from the art of TITIAN than your imagery from the kingly crag. You do not know a human face at the first glance, though you may seize on one frequent expression ; and mountains are hard to know as human faces. Let your easel stay in the corner for a week ; take your note-books and wander over the hills ; sit for an hour or two at a time, and do nothing but *look*, with your mind wide-awake, at what Nature will show you. After that you may begin and do something worth while ; something more than a superficial daub, ignorantly incomplete ; something more vital than a laboured image, which can never be true because began at the wrong end of the subject, with a seeing eye but without an understanding heart.

And this is true not only of majestic scenery, but also of all natural beauty that has distinctive beauty and character in any large degree.

That brings one to another point. First, you must study scenery closely before you can paint it at all ; you must acquaint yourself with form and substance, and watch what light and shadow do with both in revealing and concealing, in blanching or in flushing, before you can interpret by art. You must know the detail in order to paint the general. Then comes the selection of subject. And here it is impossible not to wonder at the limited range covered by our landscape artists. There were some papers on the subject a while back in these columns which I read with interest, though not able always to side with the writer. But a main drift, if I remember rightly, was to chide our landscape men with the manifold aspects of Nature that they leave unrecorded. Such blame is no doubt deserved to some extent, though not nearly to the extent now as it was fifty years ago : for the power of representing atmospheric effects, and the influence of the literature of the day in its close observation of external nature, have immensely extended the range of subject. By range I mean, of course, not area, the result of travel, but variety the result of observation. Another point not sufficiently understood or insisted on is the faculty for perceiving what is most characteristic in any given scenery ; and not only this, but also what is the state of atmosphere, the conditions of light and shadow, which also are most characteristic, or rather which bring out most forcibly the characteristic beauty—the significance, so to speak—of any given scene or feature in a landscape. This faculty of perception is in some artists innate ; doubtless in TURNER it was so as to atmospheric conditions. Among living artists a direct and simple example would be the elder HINE in his water-colour pictures of the Surrey downs. A better instance would be the late JAMES RAVEN in his mountain studies in the English lake country, full of the mystery of shifting mists and storm-cloud. But with most artists this faculty of seizing the characteristic is of slow growth, the result of experience and endeavour ; above all, of a receptive imagination, which, while not eager to impress upon the face of Nature the consciousness of its own human moods and vagaries, is yet keenly sensitive to influences from without. One man will travel and bring back a folio of pretty sketches which tell you as much about a place as a popular guide-book that calls all strata, rock ; all hills, mountains ; all vegetation, trees—with no indication of the difference between a chalk and a limestone cliff, between an oak and an elm, between the



work of the earthworm and the upheaval of the granite foundations. Another returns with a lot of fantastic notes suggested by realities which they in no way resemble. Another, mayhap, sets you at once in the heart of things; he has seized upon precisely those traits which mark scenery as of one locality and no other. It may be a certain curve in the horizon lines of mountain or hill, or the way in which they stand shoulder to shoulder, or it may be the situation of picturesque towns, always on a hill with crown of towers, or always beside a river with span of friendly bridge; or the mode of building, or the set of houses together, or some detail of form striking because characteristic and frequent. All artists know what a factor in a landscape are the form and the colour of the house roof, tile or slate or thatch, deep-eaved or shallow, steep-pitched, gabled, many dormered, or simply sloped. Or it may be the growth of special vegetation, the waves of woodland, the beech-woods of Surrey, the fir forests and birch glades of Ardennes, the clambering pine woods of the Tyrol, the filmy cloud of olive on the ochreous soil of Tuscany, the group of cypress or solitary stone pine about the Campagna farm, with its faint mountain background. Or there may be distinctive peculiarities in the crops, or in the configuration of the cultivated ground, not noticeable at first, but imparting certain colours and lines to the land. What a difference it makes, for instance, whether the fields are divided by walls, or hedges, or hedgerow banks, or by nothing at all, as in parts of France during summer, where the cultivated land looks like a kaleidoscopic pattern of soft hues. So on, *ad infinitum*, one might cite the kind of minor details that are in landscape as the little personal traits in human character—characteristics on which a painter should seize if he would bring up the distinctive and familiar look of the country. But which he does seize—how often? Let us illustrate by example from scenery close at hand which has suggested this train of remark.

Here we are, then, dwellers in an old farmhouse (that would make the fortune of a novelist as a background to his drama) high up on Welsh hills above the Mawddach estuary, which twelve hours out of the twenty-four is a brimming loch, reflecting the changes of sky and earth, and the rest of the time presents a strange surface of rippled sand and winding streams and pools, full of the subtlest colouring. On that side, the hills are broken below by patches of quarried rock and masses of close wood, and above into curves of upland pasture, craggy knolls, scrub and heather. Behind and above again Cader Idris and his brethren lift their high lofty ridges of bare rock, furrowed with watercourses, and their steep sides that fill with purple shadow in the hollows. To the west the hills lessen to the sea cliff; on the eastward the horizon has the fine peaked wave line which in Wales gives a mountainous character and dignity to comparatively low heights. Into the shining river bed project curiously jagged ridges of bare rock and wooded knolls. On this side the water the hills are riven into flanking cliffs of pale rock and bosses of heather and gorse, walls of shelter to the narrow valleys or gullies on the inner side. Then the hills rise abruptly again with crag and boulder among the short turf, and purple and gold glories of gorse and heather. Highest of all, Diphwys looks over the estuary towards Cader, and takes the low drifting clouds on his brow. These are some of the main and well-known features of this scenery, so well known that apology might be needed for describing them, were it not done for the purpose of pointing out that not in the lake-like windings of the estuary, or the ridged form of the eminences, or the hanging woods on the cliffs is it that the especial character lies, but in the detail and in the combinations. The geological stratum strikes a key-note in the chord of colour—grey, not the warm grey of granite, but the cold grey of a slaty rock. Grey are the crags and boulders and serrated ridges that break out through the turf; with solemn grey rock are walled and roofed the lone farmhouses on the uplands; grey are the cosy nests set back against the cliffs, from which you hardly distinguish them save by the group of sheltering wind-blown trees beside the stream; of grey boulders and wedges are the dry walls and sheepfolds that map with straggling lines and knots the green hill sides. In districts of slate quarry this use of the grey rock becomes sad, even oppressive, though in the mountains it takes fine tones. But here the grey seems the natural and fit complement of the abounding green. Another characteristic fact is that the excessively broken nature of the ground and the narrowness of the valleys giving precarious room for the farmers' crops up in the hills, the grass meadow and patches of cereal eddy

in and out among the bossy knolls of wild rock and heather, here a wandering thread, and there widening into a sweet curve of flowerful greenness. The little fields of barley and oats run between the cliffs and fill with pale gold the available slopes and ledges. Along the high-lying valleys stony ways, footpaths rather than roads, go clambering up and down from farm to farm, crossed continually by the mountain streams that mark their downward course to the sea by freshening pastures and little oases of flowers and birch trees. The further end of the valley gorge is closed by a distant wave line of peaked heights, or oftener yet by the shining level of the sea. The curves of the Welsh coast bring many an unexpected view of the sea. After toiling up some craggy path between the cliffs you may find yourself suddenly looking over a breezy swell of turf and boulders to a dip in the hills, where, like a vision, spreads the lustrous sea bounded by a line of amethyst mountains, dreamy, far away. Sometimes, on a hot, still day, a weird white mist will float inland; like ghostly shapes the soft clouds pass between the parted hills, and gather and close until a deep bar of rolling whiteness, touched with iridescent gleams, shrouds all the lower heights, and above it Cader Idris and his peers rise solid but mysterious, strangely hued with pale jewel colour. You must have ascended pretty high to see this. Below you the mist thins to a vapour, and the sun glints through it on the farm pastures, where the mowers look like spectres bending to and fro at their toil.

These are a few of the summer aspects and details essentially distinctive of this part of Wales, and yet how many artists have recorded them? Not the men who pitch their sketching umbrellas about the mouth of the estuary and paint rainbow-tinted versions of the striking view up the Mawddach. Not the young painters, imbued with one corner of Mr. Ruskin's teaching to the exclusion of the rest, and who seem to have journeyed hither many miles only to copy a boulder and a tangle of brambles and bracken that they might have found within five miles of their northern town. There is one working away in sight of me now. Of course there have been and are artists whom the grander aspects of Welsh scenery have drawn to their highest efforts. ALFRED HUNT, for example, has done very fine work about Harlech and the spurs of Snowdon. He is one of the few landscape painters of the day who is not afraid to attempt record of intricate atmospheric conditions, having a fine sense of their fitness to the character of certain scenery. We only wish he would try his hand at a summer sea fog beneath Cader. We recall many a painstaking, many a pretentious picture gathered from the region of North Wales, which has told well enough on the walls of London exhibitions, but might have been set down in the catalogue as painted in any mountainous part of Great Britain and Ireland with equal claim to please. But with exception of the Welsh subjects by the ever-to-be-lamented DAVID COX, very little work remains in the mind that bears unmistakable cachet of fidelity by the selection of such characteristics of the scenery as I have indicated. The faculty for perceiving them has been wanting, or has been warped by false ambition, or false taste.

I have taken the distinctive marks of one locality merely as illustrative of a principle which applies equally to all scenery, namely, that a sympathetic and truly artistic landscape record must include—nay, must mainly depend upon—the characteristic; by characteristic meaning not merely the permanent features of a landscape, but the signs of the toil and the life of its human dwellers, and those combinations or conditions of atmosphere which are of an inherent unity with the scene. A careful analysis of TURNER'S work proves this; and a study of the landscape of contemporary artists who stand above the average level reveals always the perceptive faculty for the individual, the distinctive, the inherent.

On the atmospheric treatment of landscape much might be enlarged. I have but touched the point. It is here that the imaginative perception of character is tested, for selection here proves a power of reading the "soul in nature," to enter upon which would lead us from the simplicity of this discourse among the hills into an essay on æsthetic philosophy—from which may we and our readers be herewith delivered!

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**The Dean of Wells** appeals for subscriptions to supply a memorial of Bishop Ken in the cathedral, and which will consist of the following works:—A memorial window, stalls and seats in the Lady Chapel, a reredos and ornamentation of stone screen, all being executed under Mr. Sedding's direction.



## THE DISCOVERIES AT LANUVIUM.\*

BY R. P. PULLAN, F.R.I.B.A.

THERE were two cities of Latium with names so much alike, that the similarity in spelling gave rise to extraordinary mistakes. These were Lavinium and Lanuvium. In some ancient MSS. the latter is spelt Lanivium, so that we can easily believe that they were frequently confounded with one another, to such an extent that their early history was by no means clear. Lavinium—now Pratica—lies in full Campagna only a few miles from the sea coast. I visited it some ten years ago in company with our late lamented colleague, Mr. J. H. Parker, and found it to be a miserable little village, with but few remains of antiquity. Inscriptions have, however, identified it as the traditional landing-place of Æneas, the progenitor of the Latin race—named after his wife Lavinia—and the chief city of the Latin Confederation. Lanuvium, on the contrary, is situate on a spur of the Alban hills, which juts out into the plain for a mile or more, some twelve miles inland. In the Middle Ages this was a much more considerable place than Pratica, so the inhabitants, presuming upon the aforesaid similarity of names, asserted that their town was the real landing-place of Æneas, gave it the name of Civita Lavinia, and actually inserted an iron ring into the outer wall of the fortifications—which they exhibited, and which their descendants still exhibit as that to which the great Trojan attached his galley. Although, had this been true, the whole of the Campagna would have been then under water, and the Alban, Volscian, and Sabine hills mere rocky islands, for Civita Lavinia is situated on a promontory some three hundred feet above the level of the sea, and fifteen miles from the coast.

Lanuvium, that is to say Civita Lavinia, though not the celebrated landing-place of the progenitor of the whole Latin race, became in later times of great renown, for here was situated the Temple of Juno Sospita, venerated throughout the empire, to which the Consuls came to sacrifice, so that in later Republican and Imperial times it was more frequented than its more ancient low-lying sister city. It was the birthplace of Antoninus Pius; he, Marcus Aurelius, and Commodus resided in its vicinity, and it was also the birthplace of Roscius. It is now a walled town—formerly a fortress of the Colonna family, whose armorial bearings are to be seen on the walls—most picturesquely situated at the narrow western extremity of the spur or promontory. In the centre of the town there is a charming little piazza, on which there is a fountain falling into an ancient Roman sarcophagus. It is bounded by ruined palaces, and is open on one side, affording a beautiful view of the Campagna bounded by the Volscian hills, on the sides of which Norba, Cori, and other towns can be discerned. In the distance are the Circean promontory, the hills of Terracina, and the sea. I visited this spot some six years ago, with an eye to excavation, and found some most interesting remains of antiquity. Under the walls on the north are ruins of a theatre; one of the vomitories alone has been explored—this was in 1835. Subsequently the fine statue of Claudius, now in the Rotonda of the Vatican, was discovered on this spot. In the same museum stands also the previously discovered statue of Juno Sospita, the tutelary deity of Lanuvium, but of the exact spot in which it was dug up I have hitherto found no record. Juno Sospita is represented in the attitude of a protectress, with a spear and shield. Her head is covered with a goatskin, and her feet have shoes with pointed toes like the fashionable shoes of the present day, but turned up at the points.

Part of the western wall of circumvallation is of a very early period, resembling the walls of Ardea, and therefore may be pronounced to be Etrusco-Latin. Outside the walls to the south-west there is the cella of a temple of small dimensions, now converted into a warehouse. It stands on the edge of the promontory, near a road leading down to the plain, and is bounded by a fine wall of enormous blocks of an earlier period even than the portion of the town wall already mentioned.

North-east of the town there is a gradual ascent to a sort of plateau much higher than the town itself. The plateau, which is covered with vineyards, extends about a quarter of a mile each way. It is bounded by terraces supported by walls of reticulated masonry.

Sir William Gell, the best authority on the topography of the Campagna, assumed that the cella of the temple (the position of which I have just described) was that of the celebrated Temple of Juno. But there are several objections to this opinion. In the first place, we know from ancient writers that the temple was surrounded by a grove. Now the ancient wall bounding the road to the plain—which has still its ancient pavement—is only about 20 feet from the side of the cella, hardly allowing room for a peribolus, much less for a grove. In the second place, drums of columns, which from their dimensions must have belonged to a much more stately edifice—probably to the Temple of Juno—have been found on the north-east side near the terraces.

Thirdly, it is related that in the grove there were the caves of a serpent or dragon guardian, which was waited upon and fed by a

bevy of young ladies, who were devoured by the monster if they were not quite immaculate. Now, on the site of one of the terraces six years ago I found the entrance to a cave, partly filled up with stones. Strange to say, this entrance no longer exists, as the inhabitants have quite covered it over with soil for the purpose of growing their vines, and have converted the precipitous side of the hill into a gentle slope, so that this cave no longer exists, though I certainly saw it, and, moreover, had a little digging done in front of it, not for the purpose of discovering the bones of the young ladies, but in hopes of finding some ex-votos or terra-cottas.

When in Rome this year, it occurred to me that Civita Lavinia would be the most interesting site within a moderate distance of Rome (it is distant 18 or 20 miles) upon which to made excavations. On mentioning my intention to do so to Sir John Savile Lumley, H.B.M.'s ambassador, he most generously offered me his support in money and influence. After I left Rome in May, Sir John continued the excavations, and it is to his artistic skill that I am indebted for most of the sketches that illustrate this paper, and to his spirit of archæological research that I am indebted for the notes which enable me to describe the most recent finds.

My first object in setting to work was to discover the site of the temple, and with that object I commenced digging on the north-east edge of the plateau, when I soon came upon a wall of large tufa blocks, measuring about 4 feet by 3 feet by 2 feet. This wall, of which three courses in height existed, extended about 40 feet in length, and then returned for some 10 or 12 feet at either angle. Beyond these points the blocks seemed to have been removed by the cultivators of the vineyard. Unfortunately, on account of the obstacles thrown in my way by the proprietor, I could not proceed towards the centre of the vineyard. This wall I supposed to be a portion of the temenos wall. Some of my archæological friends consider it to be part of the arx, but as I found inside the wall several small terra-cotta figures and vessels, ex-votos, which are generally found within the precincts of a temple, I think that fact helps to confirm my theory.

A few hundred yards from the edge of the plateau towards the town there were some piers of reticulated work, covered by enormous masses of wall, and as this appeared to be a promising spot we commenced here, after abandoning the peribolus wall. After some weeks of excavation we came upon a series of piers with attached columns of reticulated masonry, which is a mark of first century work. These piers, which measured, roughly speaking, 4 feet each way, were 12 feet apart, placed at regular intervals, and connected by low walls. The plan of the building was that of an open colonnade or arcade, oblong in plan, with central chambers. The whole measured about 113 feet by 41 feet. There was no sign of voussiors or of architraves, so that the superstructure cannot be restored satisfactorily. But several blocks of moulded tufa were found which seemed to have formed the pedestal of a group of sculpture. Near the principal opening there was an enclosed watercourse. From this fact, and from the evidence of a figure of a naiad, surrounded by waves, found in the vicinity, I came to the conclusion that the edifice had been a nymphæum attached to a villa. Above the mass of ruins there was a corridor of reticulated work. This was above ground. After we had been at work a few days and had got down about six feet, to the original level, which, strange to say, had no signs of pavement, we came upon a horse's head rather larger than life-size, of decided Greek character. The nose was broken off, but there were holes for a bronze bit. From my recollection of the horses' heads of the quadriga which we found at Halicarnassus, where two similar heads were found, I concluded that we were on the track of a quadriga. If so, the discovery would be most important, as the quadriga we found at the Mausoleum and which I was enabled to restore from the fragments, was the only one hitherto discovered. A comparison between the style of the horse's head and that of one from Boudroum is conclusive. Two other heads were also found close to the ruins. Subsequently—after I left—the spoke of a chariot wheel turned up. This was a conclusive proof that the quadriga theory was the correct one. An ear which does not fit any one of the heads was lately found, showing that there was a fourth horse, also several fragments of legs, tails, and hoofs. Hitherto the sculpture found has been fragmentary, but this is almost always the case. I have, at various times, witnessed the disinterment of many pieces of sculpture at Halicarnassus, Cnidos, Priene, and at the House of the Vestals at Rome, but have never seen a statue dug up entire. The statue of Mausolus now in the British Museum was in more than fifty pieces, and an arm of Minerva, which I found at Priene, in quite as many fragments, and it was only by the extraordinary skill of the workmen at the British Museum that these were put together in such a satisfactory manner. One of the very few statues found complete is that of Claudius in the Vatican, which was discovered in the theatre of Lanuvium in a recumbent position, with even its nose intact. This is most unusual, as the nose of a statue is generally broken off in its fall, and you may observe in any museum that, as a rule, the noses of statues are restorations.

Sir John S. Lumley took Professor Lanciani to Civita Lavinia, and also to the villa. He was much interested in all he saw there; he considered that we were quite right in supposing

\* A paper read at the annual meeting of the Royal Archæological Institute at Newcastle-on-Tyne.



the Temple of Juno Sospita to be on the summit. He was quite astonished at what we discovered at Magni's vineyard, which, he said, was more remarkable than anything he had found during the seventeen years he has been engaged in excavations, such an *ensemble* belonging to an entire group of statuary decoration being almost unique. So also with regard to the horses, which, did they turn out to belong to a quadriga, would be quite unique. He thought they had an archaic character, and that they might have been copied from an ancient Greek model, and they struck him, as they did us, as resembling those of the Parthenon.

An equally extraordinary find was that of six torsos of Roman warriors clothed in the lorica, sagum, and zona. Four of them were found before I left; the other two, which are still more complete, afterwards. They are evidently of late Roman times, and it is difficult to imagine their connection with the chariot group. I may add that the head of a female divinity, Greek in style, has been found by Sir Savile. This apparently was that of divinity in the chariot. The most likely theory is that the horses and the divinity were either the work of Greek sculptors brought from some other place, or imitations of Greek work by Roman sculptors, and that if the warriors had any connection with the chariot group, they were added at a later period.

I may add that the belly of a horse, with trappings like those on the equestrian statue of Marcus Aurelius on the Capitol, was also found.

It is not quite certain that the figures were equestrian. I think they were not, as the bend of the lambrequins is not sufficiently sharp; but that they did not ride the horses of which we found portions is almost certain, as the spoke of the wheel proves the existence of a chariot. If the remaining parts of the horses and the rest of the quadriga are eventually brought to light, I venture to say this will be the most remarkable discovery of modern times.

The excavations are at present stopped on account of the hot weather and the approaching vintage; but they are to be resumed by Sir John Savile Lumley in October, and I am anxiously waiting for further interesting results.

I may add that we have also in hand an excavation on the site of a villa of the first century near Civita Lavinia, which has hitherto yielded certain fragments of sculpture, which show that we are on good ground. We have found two or three chambers paved with variegated marbles and mosaic, and pieces of sculpture figured of a high style of art.

On beginning we came upon the hypocaust of a bath in complete preservation; but, finding that the superstructure had been disturbed, I moved the men to the edge of a terrace where there were some fragments of porphyry columns, and within the line of the terrace came upon a series of chambers richly paved, within which were fragments of fine sculpture. Hitherto no inscriptions have been brought to light, either at Civita Lavinia or at this villa, that could throw any light upon the date of the buildings. But the villa is commonly known by the name of that of Caligula.

## THE PARIS EXHIBITION OF DECORATIVE ART.

FRANCE has now bestirred herself to serious rivalry with South Kensington, says a correspondent of the *Manchester Guardian*, and the scheme for a great museum of decorative art, with a thorough reorganisation of technical education in connection with it, is taking a more and more definite shape every year. This year the Union Centrale des Arts Décoratifs has just opened its third annual exhibition in the Palais de l'Industrie, after bringing to a successful termination a monstrous lottery scheme for the prosecution of the undertaking, which has put some millions of francs into its coffers, at the expense of the peace of mind of the like number of modest speculators throughout the country. The Union Centrale, in which several other societies with the same object have been merged, is nothing if not comprehensive. Its aim is to found not only a museum but a vast library of decorative art, a course of lectures, competitions between artists and manufacturers, and between the art schools of Paris and the provinces, and finally exhibitions, permanent or temporary, in furtherance of the work. All this represents the national sense of the closeness of the international struggle for supremacy in the markets of the world, and it is almost a direct answer to the challenge of South Kensington, as South Kensington was, in its turn, an answer to the challenge of the French exhibit in 1851. The most remarkable thing about it is that it is in a large measure due to private initiative. The manufacturers seem to see the necessity of acting for themselves. The undertaking will be in the main self-supporting; the promoters will take what they can get in private gifts and in subventions from the State, but they will charge for admission to their museum, as they now charge for admission to the annual exhibitions.

The exhibitions adopt the general scheme of classification already drawn up for the museum. That of the present year is confined to the industries in stone, wood (for construction), earth, and glass. Its forerunners were devoted to metals, tissues, wood

(for furniture), and paper. These are classified in sections of modern work, State industries, and a retrospective collection. The system of object-teaching is applied to every art that admits of it under the conditions of space, &c., in the building. Thus architecture is illustrated in huge models of entire structures, some of which give quite a picturesque appearance to the garden of the palace. There is a considerable show of implements and of machinery—saws, for instance, of all kinds, to work by hand, and saws to work by steam. All the great publishing houses have sent their best technical treatises, and these are being carefully catalogued to form the nucleus of the future library, and a perfect technical bibliography of all the arts. The thoroughness of the scheme is exemplified in the wide application given to the term "industries in wood." This is to include every kind of wooden house—houses on sea as well as houses on land; and the Union hopes equally to count on something in the building of a man-of-war as in the building of a town house or a rustic bower. "Grace of line, perfection of workmanship, the very style of sculptured decoration, have in naval architecture a character of force and harmony which constitutes a grand art." "Rolling" houses come in for their share of attention; and carriage building, both for road and railway, forms part of this gigantic show.

The ceramic section is both actual and retrospective, and in this the managers congratulate themselves on having stolen a march on other countries. They took the lead under Palissy, and, according to their own showing, they have kept it to our day in a second Renaissance of the potter's art.

Their competitions for the year (altogether distinct from the exhibition), one of which provides for a travelling studentship, include in stonework prizes for a monumental chimney suitable for a library, and for work in gem-cutting and the engraving of precious stones. In wood we are to see the best "belfry for a town hall" that native ingenuity can produce, and in earthenware and glass the most tasteful objects that can be fashioned from these materials.

The irresistible conclusion formed from a view of the exhibition as it stands is that France is very serious in this undertaking, and that when she is serious she is hard to beat. Foreign competition seems a folly in view of the marvels of the present and the past in that section of the exhibition devoted to the manufactures of Sèvres. Room after room shows in the order of its development the splendid history of this national institution—from the earliest and often not the least successful beginnings down to the colossal vase commemorative of the last transit of Venus. How can we hope to rival the French in mere delicacy and felicity of artistic invention as displayed in this work—the planet figured as an exquisite female form sailing majestically past the sun god seated on his throne, with one hand before her eyes to shield them from his burning rays. Thousands of objects like this show that high faculty in such work is not an accident, but a law of the French mind, and one hesitates to say in what kind of labour demanding taste in decoration, apart from mechanical skill, they ought not to excel. It is probable that their momentary discomfiture in the industrial contest is due to the fact that mechanical skill now plays a more important part than ever in modern production, and that herein they are not so obviously to the manner born. They do not appear to realise this in its full force, and at present their whole effort, as exhibited in the organisation of the Union Centrale, seems to be devoted to a gilding of the refined gold of their natural aptitude in the purely artistic part of the arts. This, however, would be enough to threaten the empire of South Kensington, and the rise of that institution seems to have been about the most disquieting fact for them since Waterloo.

## THE ROMAN REMAINS IN BEVIS MARKS.

A LETTER from Mr. J. E. Price, F.S.A., the secretary of the London and Middlesex Archæological Society, gives some further information respecting the Roman remains which have been found in Bevis Marks. Mr. Price says the whole of the sculptures taken from Castle Street are carefully preserved pending arrangements necessary, before they can be transferred to the Guildhall Museum. The works are suspended for a short time only, owing to the remainder of the structure yet to be cleared being under the foundations of adjoining houses now in course of removal. When these buildings are gone we propose to complete the work which is already so encouraging. The fine section of the wall which crosses Castle Street has been carefully measured, and all sketches taken prior to the filling in of the excavation—a matter of obvious necessity—in order that the traffic should not be needlessly impeded. This particular section of the wall is of the highest interest because the facing is perfect in every respect, and the treble course of bright red tiles well defined. It is 8 feet from the surface line, and as is usual about 8 feet 6 inches in thickness. The sculptures already found comprise a huge stone sarcophagus, hewn from a single block of oolite, and measuring 7 feet long by 2 feet 4 inches wide; it lay parallel with Castle Street, and, unluckily for us, in a direct line with the "gas main," which had to be suspended in mid-air while the ponderous sepulchre was



removed. There are also numerous massive coping stones, semi-circular in section. One with seatings for the bedding of pedestals, &c. An interesting stone, probably a pilaster cap with a bold centre flower and leafage combined, with some uncertain object, but which is apparently a chair supported by legs in the form of winged lions, &c.; forming the angle is another figure draped and sitting on another form of seat. The whole of this composition, which has yet to be worked out, is remarkably suggestive. Another relic shows a panel having a well-modelled figure of a Cupid or genius in bas-relief; the body holds in one hand a festoon or wreath of fruit leaves, and on which a bird is perched. There are already two fragments of inscriptions, and of which, it is hoped, we may have more when the work is resumed. On a huge block decorated by architectural flutings, &c., is a line with the letters I V I, and beneath another D O; both commence the respective lines, and from the sharpness of the joint where they would be connected with the remainder, the other portion should be near at hand. On another fragment appear letters sharply cut, of good size, and of the best period of Roman works. They read:—

A V I  
N T I C  
R—L X X

In addition, there is a small statue of a male figure, clothed, and in singular costume; the head is at present missing. It somewhat resembles the statuette of Atys, now in the British Museum, but I fancy formerly in Mr. Smith's collection, and, if I remember rightly, found in Bevis Marks. The figure holds in his hands a cup or bowl resting upon the waist; at his right side there stands a large amphora, elegant in form. This figure has yet to be identified. There are also numerous isolated pieces, such as a panther's head, fragments representing heads and limbs of other animals, together with a large number of capitals of columns and other architectural pieces. These remains have evidently been employed as building materials when constructing the line of bastions which are attached to the city wall in this locality. They evidently belong to the same series as did those taken from the two bastions already explored. They were all standing in the reign of Queen Elizabeth, for their positions are well defined upon Aggas's map, belonging to their time. Two have been fully investigated, and I believe this to be a third. Of the first, a fully illustrated and descriptive account was published by our Society, and of the second I possess all requisite plans and sections, together with sketches of the sculptures found. Their illustration has only waited for the Society to be able to afford the necessary expenditure. Of the third, we are now acquiring all information possible. It appears to have been about 25 feet wide, some 12 feet high from the chalk line, which marks the level of the building, and its base is about 4 feet below that of the main wall, from which it projects about 15 feet. That it forms no part of the wall, but was built against it, is shown by the presence of the ironstone plinth which runs behind it, and which is continuous in its course throughout the whole line of wall. It has been suggested that the work in hand might well be undertaken by our local society. No doubt the Council of the London and Middlesex Archaeological Society would gladly endeavour to do what is necessary in such cases could they meet and discuss the question in time; so would also the Council of the Society of Antiquaries, or the Common Council of the City of London; but there is no time to do so, and, therefore it is that we consider that it is advisable for there to be a small executive of working London archaeologists, ready to get at, accustomed to work with each other, and possessing, moreover, the confidence of the general committee, which has the authority to act at once, and who could make additions or fill up vacancies in the executive did occasion require. As an illustration of how far such a matter is beyond the scope of a local society dependent on its annual subscriptions and full of work in hand as is our own, I may add that the expenses of this, the first portion of our work, have already reached just 60*l.*—little enough when compared with the value and interest of the objects found—and when the work is resumed, if I judge correctly, it will have to be continued for some weeks more. Not less than thirty-five loads of rubbish had to be obtained in order to make good the void caused by the extrication of the sculptures.

### THE CARRARA MARBLE QUARRIES.

A REPORT on Italian industries has been prepared by Mr. Beauclerk, of the English Embassy at Rome. The following is the part relating to the Carrara quarries:—

The chief riches of Carrara are derived from the world-renowned marble, of which there are 645 quarries, though only 327 are at present worked. I am happy to note that the odious cruelties to the numerous oxen formerly used in the transport of marble, which have been narrated by so many writers, have now almost entirely ceased, in consequence of the construction of railways from the seaport into the heart of the marmiferous mountains,

In 1879 the total amount of marble brought out of the quarries was 65,841 tons, and there is a yearly increase of the quantity. From 1860 to 1880 the tolls levied on marble by the Commune of Carrara amounted to the sum of 111,792*l.* Over 5,000 men are employed in the works, 3,000 of them working as miners, hewers, and polishers in the quarries themselves; there are 100 studios of sculpture, &c., with over 1,000 workmen; 60 sawmills, with 275 mechanical saws, worked by 350 men; and 22 polishing-wheels, occupying 70 men; whilst 400 others work on marble at the seaport.

The labour of excavation is hard and perilous, the quarries are far from the homes of the workers, and the paths leading to them are often very difficult and dangerous. The men work on the summits of precipitous rocks, exposed to the full heat of the burning sun and to every blast of the violent winds, without any kind of shelter; many of them are suspended by ropes from vertiginous heights. The refraction of the sun from the white marble is well-nigh intolerable, and the atmosphere is impregnated with an impalpable dust, raised by the wind from the continued pulverisation of the roads and material, which is most prejudicial to the health of the labourers. Most of the quarries are at an altitude of from 100 to 200 mètres, and from these heights blocks weighing from 20 to 50 tons are let down by ropes, the men being obliged to accompany them in their descent, which is extremely hazardous, and is rendered the more so by the primitive and careless way in which it is conducted. All the work of cutting out and blasting is done under the most antiquated systems, no modern scientific or mechanical inventions being adopted. The employers are apathetic and niggardly, the workmen foolhardy and ignorant. Hence, numerous accidents occur in every operation.

Children are set to work at a tender age, and hitherto the Government appears to have taken no notice of the whole matter, beyond the collection of taxes. The lower classes of workmen come down to Carrara from the mountains with their wives and families, the latter finding places as domestic servants or begging on the roads. Wages average only 2½ frs. or 3 frs. per day. Nothing is drunk but water, and that often putrid and bad. Breakfast and dinner alike consist only of dry bread with a raw onion or two. Employers pay their men by the week, and make no contract with them for a longer period. In case of a suspension of work from whatsoever cause no compensation is given, and in the event of accidents it is only occasionally that some small present is made to the mutilated and helpless sufferer. Yet the owners make fabulous profits, especially when they hit upon a vein of marble of unusual beauty and value. The hours of work are from 8 a.m. to 4 p.m. in winter, and from 4 a.m. to 1 p.m. in summer; but the distance of the quarries and the excessive fatigue of the work must be taken into account.

The habitations of the workmen are miserable in the extreme. Their children, exhausted by premature labour, grow up dwarfed and lean, and as adults appear pale, meagre, bent, and weak; far different from the Herculean navy whom one would expect to find engaged in such colossal exertions. No education or improvement is even attempted for this unhappy class. Worn out by incessant toil and insufficient food, they abandon themselves on holidays to complete sloth and frequent drunkenness, whence naturally follow crimes of violence and indecency. Thus the miners have become a turbulent and dissolute race, with no ideas of co-operation or fraternity, to whom the friendly societies and similar establishments are of no use or advantage. It is needless to say that Government inspection and supervision are urgently needed to alter such a state of things. The remedies are obvious, and the evil is great.

The quarries of the Massa Mountains are reported to be in even in a worse condition; they are, however, of great importance from the fine quality of their marbles, and their value is daily augmenting. At Serravezza alone the works are better looked after, and the men are paid lower wages in consequence! The annual value of the Carrara marble is estimated at 160,000*l.*; it is exported to every European country, France taking the largest quantity. In Massa there are 200 quarries; the workings were only opened in 1836, and in 1864 the exportation amounted to 10,000 tons, worth 36,000*l.* At Serravezza in 1817 there were only ten quarries; now there are 140, exporting 48,000 tons, worth 48,000*l.* The price of marble varies, not only according to its quality, but rather in proportion to its beauty, and the size of the blocks for purposes of statuary, viz.:—

Cost at the seaport—		£	£
1st quality, from . . .		12	to 64 per sq. mètre.
2nd " . . .		9	12 "
Spotted marble . . .		6	12 "
1st quality, pure white . . .		10	— "
2nd " . . .		7	— "
3rd " . . .		6	— "
1st " veined . . .		10	— "
2nd " . . .		7	— "
Violet-hued marble . . .		14	20 "

Some blocks for sculpture have no fixed value. There is said to be one in the possession of a rich trader at Carrara, for which he asks 2,000*l.*



## NOTES AND COMMENTS.

THE new Institute of Architecture, Science, and Art, in Dundee, has been established, with Mr. JAMES MACLAREN for the first president, and Mr. CHARLES OWER for the honorary secretary. The members are to be engaged professionally in the practice of architecture, the applied sciences, or the fine arts for a period of not less than seven years. There are also associates and honorary members. The entrance fee for members is ros. 6*d.*, and the annual subscription is to be of the same amount. Associates are to pay 5*s.* entrance and 5*s.* yearly. The season is to last from October to June. In addition to the ordinary meetings the members and associates can meet in classes for the study of specific subjects. Prizes will be offered for designs, some being restricted to members and associates, while others are open to residents in the counties of Forfar, Fife, and Perth. The papers which are to be read in the first session are on attractive subjects. Professor BALDWIN BROWN will lecture on "Architectural Art," Mr. PATTULLO on "The Law of Building Contracts," Rev. G. M. SMITH on "Church Bells," Professor CARNELLY on "Chemical Facts connected with Plumber Work," Mr. G. S. AITKEN on "Ecclesiastical Architecture," Professor EWING on "The Sanitary Inspection of Dwelling-houses," and Mr. SPINDLER on "Art Work in the Middle Ages." The Institute begins under good auspices, and it deserves to succeed.

WHEN the penny post was introduced it was proposed to use envelopes on which figures were to be engraved from designs by known artists, and copies of one which was produced by Mr. MULREADY as an experiment are now found in collectors' portfolios. It is needless to say that the plan was not carried out, and a head of the QUEEN engraved on steel was substituted, and was in use for many years. Latterly one cut on wood, and much inferior in style was substituted. It is now proposed to form a committee, who will report on the possibility of introducing stamps of better design and colour. A reform of this kind is essential. The English are about the worst in style among European stamps, and unhappily the example of using inferior work has been imitated in the Colonies. If the English is contrasted with the French postage stamp, it must be concluded that there is a singular absence of designing power in this country.

THE competition for the new municipal buildings at Burnley has been decided in favour of Mr. HENRY HOLTOM, of Dewsbury, on the recommendation of Mr. WATERHOUSE, A.R.A. Mr. HOLTOM is now Mayor of Dewsbury, but in spite of the time claimed by his civic duties, he has been able to succeed in two important competitions in the course of a few months.

THE next award of the prizes in connection with the OWEN JONES Memorial will be made in 1885, when six prizes are offered for competition, each prize to consist of a bound copy of OWEN JONES' "Principles of Design," and the Bronze Medal of the Society of Arts. They are open to "students of the schools of art, who in annual competition produce the best designs for household furniture, carpets, wall-papers and hangings, damasks, chintzes, &c., regulated by the principles laid down by OWEN JONES." The prizes will be awarded on the results of the annual competition of the Science and Art Department. Competing designs must be marked "In competition for the Owen Jones prizes." No candidate who has gained one of the above prizes can again take part in this competition.

DUNFERMLINE, although an ancient town, is not large; but at the last art exhibition 127 pictures were sold, for which 1,611*l.* was received. This is satisfactory to the artists and honourable to so small a town. It is found that 8,650 people paid for admission to the galleries. Although the success of the late exhibition has been so gratifying, the Council have come to the conclusion that, for various reasons, it would not be prudent to attempt to hold one this year; but they hope to make a special effort to secure an equally interesting and valuable collection as soon as practicable.

THE new extension of the Walker Art Gallery in Liverpool will be opened to the public on Monday next, and remain open until December 6. The exhibition this year is unusually

interesting, as, in addition to the usual display of contemporary art, nine galleries will be occupied with representative exhibitions by the leading art societies. There will be works from the Grosvenor Gallery, Royal Society of Painters in Water-Colours, Royal Institute of Painters in Water-Colours, Royal Hibernian Academy, Institute of Painters in Oil-Colours, Dudley Gallery Art Society, Society of Painter-Etchers, Liverpool Academy, all of which will be arranged by artists and officials of the various societies. There will also be a collection of architectural designs, which will be hung by Messrs. ALDRIDGE, KIRBY, and CULSHAW.

THE prehistoric archaeology of Ireland has hardly received the attention it merits. The remains at Newgrange suggest how much must still exist in a county like Meath, which has undergone many transformations. The latest discovery is a beehive house at Tara, the hill on which the general assemblies of the petty kings and chiefs were formerly held. The house is about 10 feet in diameter. The walls are of field stones laid dry, and from 15 to 18 inches thick. There are two openings for entrance. The outer surface was covered with clay. A sort of white mould is upon this clay, and gives it the appearance of having been mixed with lime, but when it is rubbed between the hands the whiteness disappears, and nothing but the clay remains. The action of the heat and light produces a whitish mould on the interior surface of the stones, which gives it the appearance of being lime-washed. Above this clay, which was evidently placed in position by human hands to keep the structure together, there exist several beds of material in undisturbed layers, fine sand, gravel, loosely aggregated gravel, sand, and mould. In an adjoining field the topmost slab of a former habitation was overturned some half century since by a ploughshare, and disclosed a larger compartment of oblong form.

A CURIOUS document relating to St. Mary's Church, Maldon, has been discovered. It is an answer to an appeal to King CHARLES I. for aid towards repairing the building. The inhabitants said they subscribed to the uttermost, but fell short of the required amount by a thousand marks. His Majesty gave authority for the collection, and arranged that "Two Bayliffes and two Justices of that Borough shall give order for the keeping, yssuing, and bestowing of the sayd moneyes and the accompts thereof, that the publique worke intended thereby for reedyfying of the Church may be performed accordingly." This was in 1628, and it is not a little remarkable that at the present time the church is in no less urgent need of repairs, while no money is available to pay for them.

HUNGARIAN industry appears to be showing progressive improvement. It is declared to show prosperity, and to be making energetic efforts to take the position which foreign competition has hitherto maintained. The furniture manufacture, the production of china, majolica, and bronze, are stated to exhibit signs of progress which a few years ago could not possibly have been anticipated. In the building trade Hungary is entirely independent of foreign assistance. The brick trade was very prosperous in 1883 owing to the building activity. No less than 85,000,000 to 90,000,000 bricks were used in Pesth in the course of the year, at from 1*l.* 13*s.* to 1*l.* 16*s.* per 1,000. There are six factories in Hungary employed in the manufacture of furniture and of other articles of bent wood, principally for foreign purchasers. The value of the exports was from 1,500,000 to 2,000,000 florins. The furniture trade in Austria is no less important. Two of the companies established at Vienna employ 8,000 persons in their factories.

THE Luxembourg Galleries have undergone some alteration, and thirty new pictures have been hung—the greater part in the central gallery. An innovation in the sculpture gallery is the appearance of several examples of sculptured gems. Among them are two cameos by M. FRANÇOIS, *Venus rising from the Sea*, and *Andromeda*, and the *Birth of Mercury*, by M. GOULARD. How is it that the art of sculpturing gems is unknown in this country, although so much money is expended every year on foreign examples? The Royal Academy might aid in fostering it if cameos and other sculptured gems were made eligible for admission.



## ILLUSTRATIONS.

DESIGNS FOR THE ADMIRALTY AND WAR OFFICE.

WE publish this week the accepted design by Messrs. LEEMING & LEEMING for the new public offices, and also the design by Messrs. ASTON WEBB & INGRESS BELL. It has been already stated that we have been compelled to delay the publication until we were in a position to produce plates which would faithfully reproduce the originals.

## ANTWERP INTERNATIONAL EXHIBITION.

THE Lords of the Committee of Council on Education have received information through the Foreign Office that the international exhibition at Antwerp will be a national and governmental undertaking, under the immediate patronage of His Majesty the King of the Belgians. The president of the exhibition will be His Royal Highness the Count of Flanders, and the vice-president the Minister of Agriculture, Industry, and Commerce. The committee will consist of 450 members, and the Belgian Parliament will be asked to vote a sum of money for the commission. The State will nominate the jury and regulate its functions. The exhibition will be opened on May 2, 1885, and will embrace five principal divisions or sections, namely:—1. Education, including the fine arts and art applied to industry. 2. Manufactures. 3. Commerce and navigation, fisheries and pisciculture. 4. Electricity. 5. Agriculture and horticulture. Each of which will again be subdivided into groups and classes. The triennial exhibition of painting, sculpture, and architecture, to which artists of all countries will be invited to contribute, will coincide in 1885 with the universal exhibition.

The growing importance and favourable geographical position of Antwerp give every reason to hope that the proposed gathering will be largely attended. No effort will be spared to insure the success of the undertaking and to make it worthy of the attention of foreign nations. All necessary measures will, it is stated, be taken on the part of the Belgian Government to protect all patentable inventions, models, drawings, or trade marks which may figure at the exhibition. An influential committee of citizens of Antwerp, under the honorary presidency of the burgomaster, is now actively engaged in forwarding this vast enterprise in its various branches.

## ART AND LABOUR.

A LECTURE was delivered lately by Mr. William Morris on "Art and Labour" in his own house at Hammersmith. The lecturer said that the subject of the lecture was "What have been, what are, and what should be the relations between art and labour?" By art he meant something wider than was usually meant by the word. He did not mean only pretty ornament, though that was part of art; he did not mean only pictures and sculpture, though they were the highest manifestations of art; he did not mean only splendid or beautiful architecture, though that included a very great deal of all that most deserved to be called art, but he meant all those things and a great many more—music, the drama, poetry, imaginative fiction, and above all and especially the kind of feeling which enabled us to see beauty in the world, and stimulated us to reproduce it, to increase it, to understand it, and to sympathise with those who especially deal with it. In short, by art was meant the intellectual and therefore specially human pleasure of life, distinguished from the animal pleasure, and yet partaking of its nature in many ways, and which pleasure is produced by the labour of men, either manual or mental or both. Now this pleasure he was sure the world could not do without. Nothing could take its place. If they lost that they lost civilisation; nay, all life that was worth living; for surely whatever degradation men might undergo they could never live the innocent life of the beasts, or be happy in such pleasures only. Furthermore, of late years some who most loved art—and he would name his friend and master, Mr. Ruskin, as the most prominent among them—had likewise awakened to a sense of a terrible lack in the life of to-day. They have felt as if this pleasure of life were slipping away from the world, as if something or other were robbing them of it. That decrepitude of art which once only filled them with dismay and hopelessness showed with another face now, and they recognised in it one of the tokens of the coming change in the basis of society which they so ardently desired. All along they had dimly seen that what was called modern commerce, or the reckless war of the market, had been the foe of art or the pleasure of life, and now at last they were beginning to see that the very sickness and confusion of that pleasure was a sign of commercial war wearing itself out, fretting itself away; that the foe itself would at last kill itself, and give place to something better—nothing less than that which they and he called socialism. So, with their eyes thus cleared, they could face modern ugliness and unrest with hope, and accept it and their

own discontent with it as signs of encouragement—nay, as signals for action. Well, what they as lovers of art and defenders of the pleasures of life had learned was really this: that art depended on the labour of the mass of men, and that the commerce of modern times was destructive to art, because it was the oppressor of labour, and by the commerce of modern times they would understand he meant the system of exchange which lived on the exploitation of labour—that system of profit-grinding of which they all formed a part, either as the grinders or the ground. The practical inference they had drawn from all this was that they would do their best to overthrow this system with good hope, in spite of its apparent strength and coherence. Now, as it was by the teaching of history that they had learned this lesson, he asked their patience whilst he briefly ran over the relations of art to labour in past times, that they might have some kind of idea how it was that the comparatively modern monster of profit-grinding gradually sucked art or the pleasure of life into its relentless mill to be ground up fine with many other things, some of which he hoped would come out of the mill in a very different condition from that which the grinders hoped for. To drop metaphor, what he wanted to show them was how the enslavement of the whole mass of workers at the hands of the capital-and-labour system had necessarily involved the gradual sickness of the arts, and would, but for the coming inevitable revolution, entirely destroy them in the course of time. To pass over the conditions of men as mere savages, one came across civilised men in history served by labour under three conditions, chattel slavery, serfdom, and wage-earning, which he described at some length. The life of labour throughout the Middle Ages was a struggle for freedom from the restraint of privilege. That struggle ended in victory. Even in the eighteenth century it was commoner for people to make things ugly than beautiful, and no wonder, for the worker had, as a rule, no longer to think of what he was making, and so could take no pleasure in it. It seemed to him that the second question, "What are the present relations of art to labour?" was soon answered. The relations were simple enough, for labour was wholly divorced from art. As to his work, he was either himself a machine, or was the slave of a machine. There was no art in his work, and as to his life outside his work, he had neither money, leisure, or education, that was refinement, sufficient to obtain it. He greatly feared that some of them would think that this did not matter at all; he was fed, clothed, and lodged in such a way that he made a good workman, for making a profit for other people, and was contented with his lot—as yet. He would risk answering the third question, "What should be the relations between art and labour?" First, the workman must live in a pleasant house in a pleasant place; that was a claim for labour which he knew they would be inclined to agree with until they considered how impossible it was to satisfy it under their present profit-grinding system. They must also think that a pleasant house was and must be a costly house. Second, the workman must be well educated. There again he thought they would agree with his words till they knew what they mean, namely, that all children should be educated, not according to the money their parents happen to possess, but according to their capacity. Less than this meant class education, which was a monstrous oppression of the poor by the rich. Third, the workman must have due leisure. Overwork for profit must be prevented at any cost. The necessary maximum of a day's work must be found out, and made legal and compulsory. It follows as a corollary to this claim that everybody must labour. So much for the necessary surroundings of life under which art for the whole people would be possible. They would see that what these three things really mean was refinement of life, or, as they called it now, the life of a gentleman, and he would tell them quite plainly that if the workers had no hope of becoming refined or gentlemen, they would in the long run become brutes, and those of the well-to-do classes would be no better. Please to think of that and what it means. The lives of some of them might see its terrible meaning explained unless they grew wise in time. Now as to the manner of work if they were to have art among them once more. First, there must be no useless work done. This indeed follows as a matter of course on the limitation of the daily hours of labour, but also of course—he knew they would not agree with him at all in this—as the well-to-do classes mostly live on useless labour, the turning of the wheel of the profit-grinder. Second, whatever necessarily irksome work must be done, should be done by machines, which should be used to save labour really, and not, as now, to grind out profit. He knew that this involved the, to them, monstrous proposition that machines should be their servants not their masters, but he made the claim without blushing. Third, no useless work being done and all irksome labour saved as much as possible by machines made their servants instead of their masters, it would follow as a matter of course that what other work was done, which in truth would be by far the most important part of work, would be accompanied by pleasure in the doing, and would receive praise when done, and most true it was that the product of all work done with pleasure and worthy of praise was art, that was to say an essential part of the pleasure of life; beauty was the necessary expression and token of such work. Of course they would



say this kind of work was desirable doubtless, but impossible to realise; but let him remind them that to a certain extent it was realised in the Middle Ages, when the workman was master of his material, tools, and time. In order to realise the kind of work he had been speaking of, he must once again be master of these things, and this must be brought about, not by reverting to the system of the Middle Ages, which was obviously impossible, but by making him the master of his time, tools, and material, collectively or socially; that was to say that the labourers must regulate labour in the interests of the labourers. He knew that this meant the altering of the basis of society. He doubted not that such a change would be thought a heavy price, indeed, to pay for art even if it be true, as he still asserted that it was, that they could not have art without that change. He had called art the pleasure of life, which, indeed, means nothing short of happiness. Tell him then what was too high a price to buy general happiness with. The re-awakening of socialism, supposed to have been dead, in a new and scientific form, even in England, the stronghold of middle-class supremacy; its rapid spread over the Continent of Europe, and especially in Germany, the land of education, all these things point to the coming of the great change when the time shall be ripe for it. Nor, on the other hand, are there lacking signs of that ripeness. The lecturer concluded by saying that there were even now but two camps, one of the people and one of their masters. Between these two they must make their choice, as they would full surely find before long. Rich and poor were the words which divided the world, and he earnestly begged them to join themselves to the cause of the poor, in the hope that those two names, so long expressive of the curse of the world, should one day have no meaning to them, but that they should all be friends and good fellows united in the communion of hopeful and pleasurable labour which alone could produce art, the pleasure of life.

## FRENCH ARCHITECTURE IN COCHIN CHINA.

A CORRESPONDENT of the *Times*, writing from French Cochin China, describes some of the buildings in the small principalities. The town of Saigon, he says, is well known as one of the most attractive towns in the East, notwithstanding its evil climate. Owing nothing to natural advantages, it rivals Hong Kong and surpasses Singapore, of which the English traveller brings home enthusiastic memories. The buildings of Hong Kong are solid and grand, but French taste beats them out of the field. The roads of Singapore, half-suggestive of the jungle, supply abundance of beautiful drives; but the boulevards of the French town, without losing their tropical character, are prettier. Every house has its garden fence trimly kept. The public offices are spacious without the dreary, warehouse look of most of our Eastern buildings of the kind. Singapore prides itself on its Government House as the finest in the East, but it has not the grand façade of the Palais du Gouvernement. The French are fond of abusing the admiral who built it, and lament the twelve millions it cost; but, if it were destroyed by an earthquake tomorrow, they would build another exactly like it. The *enceinte* of the town is conceived with the ambition which foresees *la nouvelle France* the great Indo-Chinese Empire. Admiral de la Grandière, who laid it out, dreamed that Saigon was to be a town of five million souls, and he marked out the limits with this grand idea in his mind. Time as it rolled on has not fulfilled his hopes. Possibly the dream of the rival empire to British India may be equally ill-based. Saigon does not, indeed, decrease in numbers. There is even a steady increase, but it will be far on in next century before the admiral's skeleton town ceases to appear ridiculous. If the numerous villages which lie between Saigon and the Chinese centre, Cholen, are counted as part of the capital, the total population now rises to about 115,000. But the European town properly so-called (and Saigon is nothing if not European), does not contain more than 30,000 inhabitants. In 1880 Rangoon proper had a population of 134,176, and it is growing by leaps and bounds. The suburban villages of Poozoon-doung and Kemmendine do not leave us much doubt as to whether they should be included or not. They are already on the point of being engulfed, just as London has swallowed up the villages of last century, the Highgates and Chelseas and Kensingtons. But Rangoon is not a beautiful town. There are people whom it is impossible to suspect of preconceived malice who do not hesitate to declare that it is extremely ugly. Government House at Rangoon is fairly water-tight. Beyond that it would be affectation to make any assertions. The only public buildings which make any pretensions at all are the Town Hall, which is quasi-Oriental, a kind of half-caste erection, and on the other side of Fytche Square the new Law Courts, a specimen of Gothic architecture—very early and rather depraved Gothic. There is not a doubt that as far as appearances go our Burmese capital cannot be mentioned in the same day with Saigon. The general object of the average Briton in going to the East is, however, not to make a great show, but to gather together a reasonable sum of money. It comes to the old story, then. We are a nation of shopkeepers.

The correspondent next describes a visit to Pnom Penh, the capital of Cambodia, which is situated at a point of the river called Quatre Bras, a star-fish like place, which adds greatly to its commercial importance. Below the town are the Fleuve Postérieur and the Fleuve Supérieur, and above the Mekong and the Teuli-Sap, running down from the Grand Loi.

The capital is picturesque enough to look at from the outside. The actual town is like all Eastern places, much less attractive. It is the merest passage, little more than a street deep, along the river banks. In the centre of this long strip of town, in a place cleared out for itself, dwells the *personnel* of the French Protectorate. The buildings are all very solidly and attractively built, and everything is made as comfortable as possible, of course, at the expense of the Cambodians. Beyond these, and since the burning down about a month ago of the splendid house belonging to the Hong Kong and Shanghai Banking Corporation, along with a considerable slice of the business part of the town, there are no buildings except of the most ordinary kind. The royal palace is disappointing when compared with those of Siam and Burmah. King Norôdom is a flighty personage, much like the late King of Burmah. Like all children and semi-savages he is fond of new things. The main object of most of the trading people in Pnom Penh is to find out some novelty which will strike the royal fancy. Then they take care to make him pay for it. The French are rather proud of their *protégé*. He is supposed to have acquired a gloss of Parisian civilisation. What amount he has is exceedingly flaky. The palace enclosure is a huge indefinite kind of a space, inside which are a number of residences which His Majesty has built and given up one after the other. There is one which he had built in European fashion from French designs. It is now abandoned, and the key is apparently lost. At any rate, nothing can be seen except a few frescoes and roof paintings, executed in the vestibule by an Englishman named Holland. In front of this is a garden in a dismal state of desolation, with a magnificent bronze fountain, sent from France, the basin empty, the "little wanton boys" being capsized off their bladders, and the whole thing likely to collapse in another season or so. Alongside of this there is the present throne-room, an oblong hall, built in semi-Chinese fashion, with flamboyant pinnacles and lavish gilding. The walls and the panels of a double central line of pillars are covered with fine French mirrors. There is much gilding and tinsel work, especially on the throne at the end of the hall. In the centre are raised places for the most eminent among the Buddhist monks. Numerous chandeliers hang from the roof, which is adorned with mythological designs, painted on cloth sent out from Paris. Alongside of this again is a large, open, pillared hall, which serves as Parliament, law-court, and theatre. There is a sort of permanent stage at one end, and above are hung painted pieces of cardboard to represent clouds. Besides these there is the harem, in which there are three hundred or more wives, and an iron palace in which foreigners are received. This, some may remember, was at the Paris Exhibition, but it has been cut down in size to suit the king's taste for things in miniature. There are then halls, courts, stables, and what-not scattered about, notably a band-stand, where a band of Manila men discourse Offenbach's music to His Majesty when he is tired.

## CRAIGMILLAR CASTLE.

A PARTY of members of the Edinburgh Architectural Association visited Craigmillar Castle in March of the present year. The secretary, when writing to the proprietor, Mr. Little-Gilmour, thanking him for his courtesy, took occasion to mention that parts of the ruin were becoming dangerous, and that it was desirable something should be done to avert the decay. Mr. Gilmour requested the secretary to communicate with the land steward on the subject, and, in consequence, arrangements were made to have the dangerous parts made safe. A large staff of men were started, under the supervision of Mr. Menzies, architect, with the view of removing the rubbish and vegetation (ivy excepted) from the walls and arches; these latter also were ordered to be repaired and covered with concrete, so that water be prevented from finding its way down through them, as in frost the moisture is apt to dislodge the stones. Pointing has been done where necessary throughout the entire building, and the tops of the walls covered with a coating of cement, in order to prevent the rain getting in. On the main roof, which is almost flat, and which has been covered with overlapping stones, a great quantity of earth and rubbish has been removed. It was found that, as few of the overlapping stones were entire, they would only cover a small portion of the roof, and, accordingly, they were carefully laid on the south-west corner in their original position. The remainder of the roof is covered with concrete, with a smooth face of cement on the top of it, sloping down into gutters and carried through the outer wall. A stair in excellent preservation, leading from the great hall down to the west wing, and several other arch-roofed rooms and passages hitherto closed with rubbish are now opened up, and will no doubt be an increased source of pleasure to lovers of ancient architecture. The repairs have necessitated a very considerable expenditure of money, and it is highly creditable to the proprietor that he has



done so much to avert the decay of this magnificent relic of feudalism. Much of the dislodgment of stones and damage to the lower walls and arches is the result of malicious mischief, the ruin being on Sundays a great resort of "city roughs." It is to be hoped, however, that the public will co-operate with the proprietor, and endeavour as far as possible to prevent such disgraceful and lawless proceedings. In removing the rubbish from the top of the arching on the east wing, near the north-east turret, a large stone, on which is carved the Preston arms, in a state of perfect preservation, was found carefully laid face downwards on soft sand, buried six feet deep among the rubbish. It is being built in the wall above the doorway, at the foot of the main staircase. On the top wall of the passage connecting the eastern wing with the main building, part of an iron spear was discovered; while among the rubbish in Queen Mary's bedroom an eye-glass was picked up. The metal round the glass was so thoroughly corroded with rust that it crumbled away between the fingers.

### ANTIQUITIES OF SALONICA.

THE English Vice-Consul at Serres reports that in his district there are ruins of fortresses at Serres, Demir-Hissar, and other places. There are the ruins of a fortress on the top of the hill at the foot of which Serres is built. On the side of a ruined tower belonging to this fortress there is an inscription in Greek, recording that it was the "tower built by Hellen in the mountainous region." A little further off there is the ruin of a Byzantine church, which must have been very beautiful. About thirty years ago there were some frescoes well worth preserving. There is an inscription on a piece of broken marble in the court of the archbishop's palace of a votive decree of the community of Siraion, dating from the Roman occupation. There are also several Greek inscriptions in that part of the Rhodope inhabited by the Pomaks. Ancient coins are found everywhere. Five years ago a coin of the time of Philip was found at Nevrocop, and was sold at Athens for 1,000 frs. There are great numbers of antiquities at Jeni-Kiol, a village of twenty houses, the site of Amphipolis. There are a few remains of a wall on the top of the hill, from which there is a splendid view over the plain and the neighbourhood, which is full of ancient reminiscences. The plough has passed over everything, and the rain has disinterred statues, trunks of statues, and bas-reliefs belonging to the best period of Greek art, jewellery of exquisite workmanship, and abundance of coins of copper, silver, and gold. All these discoveries have been sent abroad. However, there are still some remains of antiquities on the same site, and excavations would have very satisfactory results.

Among the mosques worthy of mention are those of "Eski-Djami" and "Ahmet Pasha." The Eski-Djami, in the centre of the town, is richly endowed and has many revenues. Ahmet Pasha mosque, also called "Aghia Sophia," is situated outside the town, and is built of marble, yellow with age, and is of a simple and elegant architecture. This mosque deserved a better fate, but it now has no funds, as its revenues were derived from the Crimea. The complete ruin, however, of this monumental building is owing to the carelessness of the Mussulmen of Serres. The dome has been stripped of its lead covering, and the mosque is being gradually buried by the layers of sand brought down by a torrent which has been allowed to flow in its direction. Even the old plane trees which existed in its enclosure have not been spared. The Greek cathedral, which suffered greatly from the terrible fire in 1879, has been restored. It has still its ancient form, as the walls and arches suffered very little, but there are no traces left of its splendid mosaics and wood carvings. The "Bezesten" of Serres is an ancient building consisting of four vaults, which are in need of repairs, but no one troubles himself about it.

### WATER-SUPPLY FOR FIRE EXTINCTION IN THE METROPOLIS.\*

IN London the whole of the water-supply is pumped, and the average pressure is quite inadequate for fire extinction without the intervention of fire-engines. A large number of observations were made all over the metropolitan area by the Board of Works in 1876, and it was found that the average pressure was only about 30 lbs. per square inch, when there was no extraordinary draught on the pipes, such as that required for fire extinction. And it is not surprising that this should be so. The pressure given by the water companies is that required by statute, or, otherwise, by the customers of the companies, and even if they desired to do so it might be doubted whether, in the words of the Select Committee of 1876-7, the companies would be "justified by their constitution in incurring expenditure for fire purposes," for which purposes alone would it be necessary for them to increase their pressure.

The quantity of water delivered for all purposes is sufficient to

meet the demands for fire extinction. There are, according to Captain Shaw's reports, very few cases of short supply, and constant supply is being gradually extended voluntarily by the water companies. Hydrants have been put down by the Corporation throughout the City, and connected directly by branches with the constantly-charged mains of the New River Company, and they have on several occasions been found useful, though the pressure is not such as to admit of fire-engines being dispensed with in all cases. A few hydrants have also been recently introduced by the Metropolitan Board of Works in other parts of the metropolis. In the matter of pressure, however, the general metropolitan water-supply is undeniably deficient. There is a copious supply of water, in close proximity to the property to be protected, but it cannot be brought to bear upon a fire without the intervention of fire-engines.

The population of the metropolis in 1881 was 3,814,571, and the Metropolitan Board of Works area is about 121 square miles, including the City's one square mile. There are 55 land fire stations, 12 street, 127 fire-escape, and 4 floating stations; and the brigade consists of 588 officers and men. The annual average cost of the fire brigade for the three years 1880-2, was 99,880*l.*, or 26*l.* 4*s.* per 1,000 of the population. It is somewhat difficult to arrive at the value of the property destroyed by fire in the metropolis, but a calculation based upon the contributions of the insurance companies to the support of the fire brigade, and upon evidence given by Captain Shaw and others before the Select Committee on the Fire Brigade, in 1877, would make it appear that in 1882 the value of insured and uninsured property destroyed by fire was probably considerably in excess of 2½ millions sterling, or about 588*l.* per 1,000 of the population. As compared with efficiently hydranted places, the cost of the fire-extinguishing service, and the fire losses, are very high in London.

It will be asked why the metropolis should have been allowed to remain year after year subject to the preventable drain of wealth indicated by these figures. The reply is that the past and existing state of things have not been submitted to in ignorance or willingly, but the difficulties surrounding the subject in the metropolis have been practically insurmountable.

More than twenty years ago the Select Committee on Fires in the Metropolis directed attention to the extraordinary facilities for extinguishing fires then existing in Liverpool, Manchester, and Glasgow, and to the efficiency and small cost of the fire services in those places; and more recently, in 1876-7, the Select Committee on the Metropolitan Fire Brigade, having heard evidence as to the advantages of the hydrant systems referred to, recommended that hydrants should be put down in the metropolis at once wherever a constant supply was given, and that the water supply should be improved so as to give constant service everywhere, and increased pressure. But it was found that to comply with these recommendations a permanent expenditure of 337,000*l.* per annum beyond the cost of the fire brigade would be involved. Of this annual sum about 150,000*l.* represented the increased cost of pumping alone; and since the quantity of water required for fire purposes is infinitesimal as compared with the quantity supplied for all other purposes, it is obvious that this expenditure of power, if the whole had to be pumped to the requisite height, would be out of proportion to the result obtained. I have made a calculation, based upon the relative quantities, and upon the evidence given before the committee, from which it appears that for the purpose of discharging water through a hydrant upon a fire in this way, about 170 horse-power would be required for every gallon of water thrown. And there would be the attendant disadvantages that all the house fittings would have to be altered and strengthened, and the mains and pipes would have to be taken up, and relaid of greater size and strength, and at enormous inconvenience to the householders and the traffic in the streets; and the pressure would, in the greater part of the metropolitan area, be inconveniently great. This proposal also involved the great disadvantage that it could not be carried out until the water companies should have been ranged under one control.

As long ago as 1862, the late Mr. James Easton, who held the view that no satisfactory supply of water for fire extinction with constant high pressure could be secured in connection with the ordinary domestic supply, proposed to lay down a completely new set of mains to be used exclusively for fire purposes, but the cost would have been enormous. His estimate was 72,000*l.* per square mile, and his proposal only extended to 40 square miles of the metropolis. This area alone would have involved an annual cost for interest and working expenses of 150,000*l.* A somewhat similar proposal, but with the addition that the water was to be taken from the chalk formation at about 15 or 20 miles from the centre of London, instead of from the water companies' mains, as was proposed by Mr. Easton, and that the supply was to be used for potable and culinary purposes after being pumped to the greatest attainable elevation in order that it might have sufficient pressure for fire extinction purposes, was put forward by the Metropolitan Board of Works, on the advice of Sir J. Bazalgette, Sir F. Bramwell, and Mr. Edward Easton, in 1877. It was estimated that the introduction of this system of hydrants would have resulted in an annual saving of 60,000*l.* in the existing expenses of the fire brigade. This scheme, involving a dual supply to every

\* From a paper by Mr. J. H. Greathead, read at a conference at the Health Exhibition.



house, was taken to Parliament, but was withdrawn; and in their annual report of 1878, the Board said that they "came to the conclusion, in view of the disfavour with which the scheme appeared to be regarded by most of the local authorities of the metropolis and others, not to bring it before Parliament again in the following session." Looked at purely from a fire extinction point of view there is one great objection to all the proposals that have been hitherto made, viz., that owing to the great variations of level in the metropolis, there would, in many localities, be insufficient pressure, while in others the pressure would be excessive.

In any water supply for fire purposes, it is certainly desirable that the pressure, in addition to being sufficient, should also be moderately uniform in the hose, whatever may be the elevation of the locality. This uniformity is practically obtained at present by the use of fire-engines, but with the great drawback that the power requisite for giving the pressure is not available on the instant that the occasion for its use is discovered. Since the year 1870, when Captain Shaw first began to publish the distances travelled by his engines, the distances run have increased from 11 miles to 34½ miles (in 1882) per fire. The number of journeys made has increased from 8,000 to 29,000, and the total distances run from 22,000 miles to 66,000 miles in the year. According to the evidence given before Sir H. Selwyn Ibbetson's Committee in 1877, the fire-engines were then only used for pumping at about one-fifth of the fires. If that was still the case in 1882, then it follows that for each time the engines were used for pumping upon a fire they must have run on an average 172 miles.

When it is considered under what unfavourable conditions, and how uselessly the journeys are often made, some idea may be formed of the superiority of a system of hydrants where the power as well as the water is always on the spot ready for instant application. The growth of the cost of the fire brigade service, from the commencement of the old fire-engine establishment in 1833, has been and is very rapid as compared with the growth of the population. In the first year of the Metropolitan Board of Works' administration of it, the cost of the brigade was under 41,000*l.*; in 1882 it was 106,552*l.*, or an increase in the period of sixteen years of 160 per cent., while the population increased only 28 per cent., and the number of fires 44 per cent. And in the year 1883, the cost had further increased to over 115,000*l.* It must not be supposed for a moment that this increase is to be regarded as unnecessary under existing conditions. The cost of the London Fire Brigade is, thanks to Captain Shaw's admirable organisation, still small as compared with some other unhydranted cities. In New York, as already stated, the cost is very much greater for less than a third the population and area. There the average annual cost for the three years, 1880-3, was over 288,000*l.*, and it appears to be growing almost as rapidly as that of London, though on the other hand the population there is growing more rapidly. Paris, also another practically unhydranted city with half the population, spends proportionately more than London for fire extinction.

### ITALIAN IRONWORKS.

THE Ironworks of San Giovanni in Val d'Arno were first established in 1872. The company promoting the enterprise was unsuccessful, owing, it is said, to the inferior quality of the products, and in 1880 the works were taken over by the Società delle Ferriere Italiane, by which they are profitably conducted. The official domicile of the company is in Rome, the board of management at Florence. The nominal capital is 4,000,000 lire, of which 2,000,000 lire are paid up. In addition to the works of San Giovanni and the neighbouring mine of lignite, the company holds the iron works of Mamiano, and on lease those of Tarquinia Corneto, district of Civita Vecchia. The total gross receipts of the company in 1882 amounted to 328,646 lire 29 c., the expenses to 213,089 lire 57 c., showing a net profit of 115,606 lire 72 c.

Great improvements have been introduced within the last two years at the works of San Giovanni. New buildings and machinery have been added, and the monthly output has been raised from about 800 tons to 1,400 tons. The gross receipts for the works rose from 87,000 lire in 1881 to 147,000 lire in 1882. Attention is now being particularly given to the production of puddled iron; special articles, such as rolled joists (*travetti*), are also being made, and a contract has been concluded with the "Impresa Industriale Italiana di Costruzioni Metalliche of Turin," which, by insuring a regular sale, enables the company to undertake the production of tee, angle, and other iron bars of various qualities, which up to the present time had generally to be imported from abroad. The total number of hands employed at the works of San Giovanni is about six hundred. The workmen are all Tuscans, many coming from the neighbourhood of Pistoja. The foremen at the furnaces are paid 7 lire per diem; the hands receive, on the descending scale, 5 lire, 3 lire, 2 lire, and boys 1 lira 50 c. per diem. Twenty-five Italian lire are about equal to an English pound sterling.

The works contain six heating furnaces, three puddling furnaces on the Siemens gas system, four rolling mills, &c. The engines set up at the works are from Stuttgart, with a total of 400 horse-

power. The iron driving-wheel, made at Treviso, is 6.50 mètres in diameter. The rollers were constructed in England by Akrell, of West Bromwich; the steam hammers (three) by Massey, of Manchester. Old and broken iron is used for ordinary qualities of iron bars; for the finer kinds pig iron, made from Elba ore, melted at Follonica and by Messrs. Tardy of Vada, is employed; English pig iron from Middlesbrough is also used. The only difficulty in the way of the more extended use of English iron is the elevated railway tariff of 6 cents. per kilomètre and the difficulties of landing at Leghorn, so that the white pig iron of Middlesbrough, which costs 62 lire on board at Leghorn, has to pay, in addition, 9 lire 50 c. per ton for carriage to be delivered at San Giovanni.

### MANUFACTURE OF ASPHALTE.

AN English firm, Messrs. H. & A. B. Aveline & Co., some years ago established asphalté works in Catania, which have made great progress. They are the only works of the kind in Sicily, and employ a large number of men. Forty tons of prepared asphalté can be produced every day. The mines are situated in Ragusa, and the asphalté being analysed is found to be a pure carbonate of lime, with about 9 per cent. of bitumen and of rock, and, owing to its natural hardness, presents the most suitable qualities for making roads in compressed asphalté. Messrs. Aveline have laid their asphalté officially in Berlin, and the results far exceed their expectations, because it has turned out superior to all other qualities there laid. The position of their works is such as to enable them to ship to most countries at lower prices than the mineral coming from other sources, and thus puts this article in a position to compete with many kinds of pavements which up to now have been used on account of their being relatively cheaper. Messrs. Aveline's mastic in blocks has been admitted by the Italian Ministry of Industry and Commerce for use in many works in Government departments in Italy; its richness and elasticity is highly prized, and as their mastic is made of pure rock and bitumen, it is of great durability and unaffected by changes of temperature. Each block weighs from 57 to 60 lbs.

### THE INTERNATIONAL HEALTH EXHIBITION AT SOUTH KENSINGTON.

THE tendency at the present time is to convert the Health Exhibition into a place of amusement; and it must be acknowledged that the majority of the visitors think more of the attractions in the gardens than of the objects to which the exhibition owes its existence. How far the authorities are responsible for arrangements by which the utility of the exhibition is minimised we need not now inquire; but if the exhibitors are heard grumbling at their position they have reason on their side. Under the circumstances, it is the duty of the press to call attention to the contents of the stands which contain sanitary appliances, as they are likely to be disregarded for the sake of things of a different nature; and accordingly we offer our readers a further instalment of notes on the exhibition.

Mr. W. White.

At No. 830, Mr. W. WHITE, Abergavenny, is showing his "Hygeian Rock" building composition. The valuable properties of this patent have been reverted to upon several occasions in *The Architect*, and at the Stand it is to be seen in its various applications. For strengthening walls, 9 inches of brickwork built with it will bear the same strain as 18 inches set in mortar; for damp-proof courses, and for building brick cisterns, it is not surpassed; for providing a cure for existing damp or wet walls it is also well adapted. Its properties for imparting strength to brickwork when built up with it are clearly demonstrated in the following manner: a block of brickwork 9 inches thick, 4 courses deep, rests on supports with bearings of but a few inches, though with a span of 5 feet 6 inches. Around this is passed a chain, to which are suspended several heavy weights. Upon close examination the secret of this extraordinary strength will be found in a flitch of the composition that has been run between the two (4½ inch) walls, and which binds them together. As a further proof of the immense strain it will bear, we recently witnessed a very severe test, when weights to the amount of 1 ton 9 cwt. 3 qrs. were suspended under similar circumstances to above, without making even any deflection, much less to break the mass. Such evidence requires no comment, and we have only to add it still continues to hold quite a unique position, and is the most remarkable exhibit of its kind in this section.

Messrs. Quirk, Barton & Co.

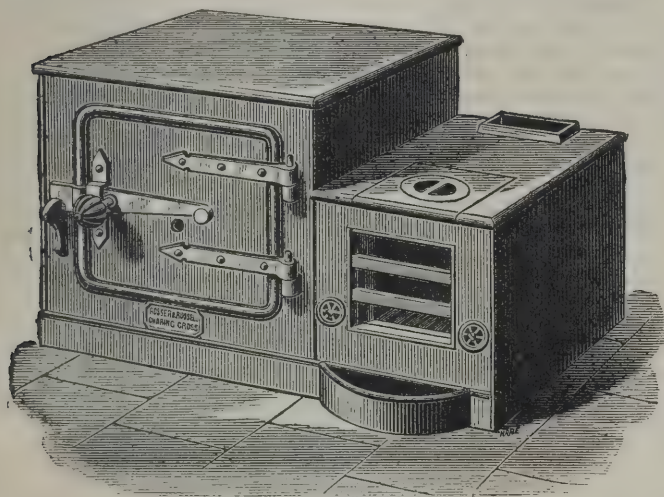
The pure tin-lined lead pipe shown at Stand 642 by Messrs. QUIRK, BARTON & CO., of Gracechurch Street, E.C., has been adverted to in the columns of *The Architect* on previous occasions. When we consider the universally admitted dangers attaching to lead pipe as a medium through which to carry any liquid we are



destined to drink, too much cannot be said in favour of this piping. There is no metal purer than tin. As from its ductility lead pipe is the one exclusively used for alcoholic liquors and extensively for water, it would be highly advantageous if it were made compulsory for all piping used for such purposes to be lined with tin.

*Messrs. Rosser & Russell.*

At Stand No. 509, in the east quadrant, Messrs. ROSSER & RUSSELL, of Charing Cross, are showing their cooking and warming apparatus, and at No. 1,180, in the western gallery, their patent ventilators and chimney-cowls are to be seen. The prominent feature at the former stand is a handsome cooking-range of large dimensions, constructed on their widely-known principles, and fitted with the latest improvements, including arrangements for raising the fire to the hot plate when only a small one is required, and for thorough ventilation of the ovens. The advantages it possesses are of no mean order, and both for strength and durability and ingenuity of construction it is not surpassed by any other in this class, and maintains the reputation the firm have justly gained. Another very important exhibit to be seen here is a newly-constructed portable range, of which the appended cut is a representation. It has received the appellation



of "The Perfect," and letters patent have been granted it. Perhaps the most novel point to be noted is that no matter how large a fire is kept up, there is no fear of anything in the oven being burned. This desirable result is obtained by warming the oven with superheated water conveyed around it by pipes from the adjacent fire, the bars of which are tubular. As we have mentioned it is quite new, though Messrs. Rosser & Russell have put it through severe tests, when it has so fully met their expectations that they are now applying the principle to full-sized ranges, and we hope shortly to be enabled to give particulars of them. The patent ventilators they are also showing answer their purpose admirably, which is that of cleansing or straining the air before it enters an apartment. This is a feature too often lost sight of, especially in close and crowded buildings where the so-called fresh air admitted through an ordinary ventilator is but little better than that it is desired to replace. The extract ventilators and chimney-cowl also possess distinctive points, and are well worth attention.

*The Sanitas Company.*

At No. 554 east annexe, the SANITAS COMPANY, LIMITED, Three Colt Lane, Bethnal Green, have a stand containing the various articles into which this valuable preparation is introduced. We need not enter into a detailed description of what Sanitas is, beyond remarking that it is a product obtained by ingenious manipulation from the eucalyptus tree. As a disinfectant it ranks high in medical and public estimation, and it is perhaps the only one which if taken internally by chance would not be dangerous. Neither should it be destructive to any substances to which it may be applied, and another important feature in its favour is that its smell is by no means offensive, which cannot be said of many disinfectants. Its uses are now so multiform that were we to describe them each at length, they would require a small pamphlet. As a disinfecting fluid, it may be used for a variety of purposes, including clothes, carpets, &c., spraying the atmosphere, and sprinkling floors, as a mouth and tooth wash, for preserving beer, as well as for water-closets, &c. It is also made as an emulsion for washing animals, including domestic pets, and for curing their skin diseases, for deodorising and disinfecting the contents of ashbins, &c., and for deodorising bilge water on shipboard. The "Sanitas" disinfecting oil has been found a valuable agent in the hospital, as a surgical antiseptic dressing, for fumigating the wards, infected rooms, &c., for dressing burns and wounds, and for the treatment of all lung and throat complaints by inhalation, especially diphtheria, in which it has been found of great assistance. Another

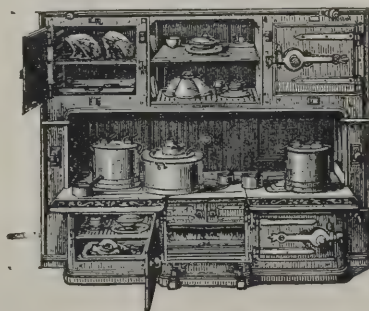
form in which it is introduced is as a disinfecting powder, and in this it takes the place of carbolic acid. Turning to the toilet, we find it as a tooth powder, toilet powder, and toilet liquid, and in soaps it is made as a fine toilet, household, and soft soap, which we can recommend from actual use. It is needless to enumerate further preparations or uses, as enough has been said to show its universal value as a cleanser and a disinfectant.

*Messrs. Walter Neilson & Co.*

At 598 in the same quadrant will be found the "Sine Quâ Non" kitchener, exhibited by Messrs. WALTER NEILSON & CO., Park Foundry, Glasgow, and 175 Upper Thames Street, E.C. As this range is in action daily, the visitor can soon make himself acquainted with its salient points. In all respects a "kitchenier," it is made to be used either with closed or open fire, and the ease with which the change is effected forms one of the points of contrast between it and others made to work with the fire open or shut up. A draught-regulating door is fitted in the open flue, which regulates the draught as may be required, and is the means of saving a considerable quantity of fuel. A telescopic flue or hood resting on the edge of the hot plate on either side of the fire is placed there for drawing over the fire, which insures a perfect draught, and will be found very useful in the case of a smoky chimney. This hood can be pushed quite back, if not required. The heat to the ovens is so regulated that it is the same at top as at bottom, and this advantage must soon be recognised by any person who purchases one in the difference visible in pastry baked in this oven. An important advantage claimed for this range is that it is to a large extent a non-smoke producer, which is accomplished by using Shaw's patent smoke abatement grating, a simple arrangement by which the hydro-carbons are so mixed with the heated oxygen as to be mainly converted into flame. The "Sine Quâ Non" kitchenier is made in two ways, one in which it would require to be built in with brick flues in the ordinary manner, and the other, with iron flues, which obviates the "setting" altogether, as it merely requires to be placed in the opening under the chimney. Made in this way it is certainly a tenant's fixture, and it will be seen, easily removed in the event of change of occupancy. A few minutes spent in looking at this range will not be thrown away.

*Messrs. Newton, Chambers & Co.*

In the east quadrant, at No. 596, Messrs. NEWTON, CHAMBERS & CO., of the Thorncliffe Ironworks, near Sheffield, and Great George Street, Westminster, have a fine set of cooking apparatus suitable for a public institution, club-house, or large mansion, and specimens also of their "Thorncliffe Range" in smaller sizes; and a new one of almost diminutive dimensions called the "Economist," suitable for artisans' use or for cottages, a complete *multum in parvo*, doing a great amount of work with a consumption of only 2 lbs. of coal per hour. The large working apparatus consists of a Thorncliffe kitchenier, as illustrated. The boiler of



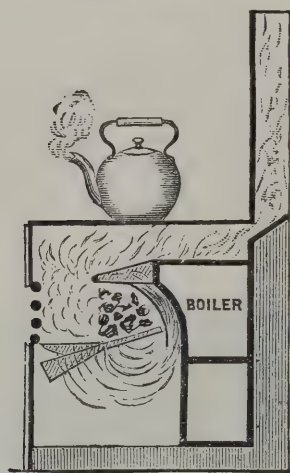
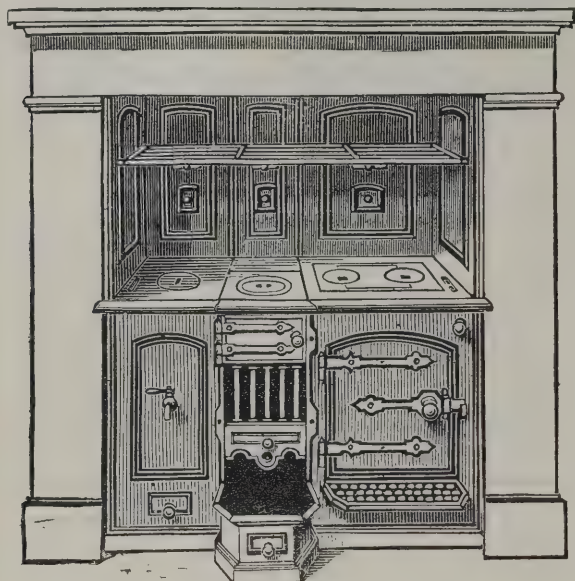
this range, an ordinary circulating bath boiler, is supplying steam to a steam-cooking apparatus adjoining. A steampipe, attached to the top of the boiler, is carried behind the steaming apparatus, and fitted with four valves: one is attached to a tin steamer for fish or joints, the next to a copper steamer containing four kettles, a third is connected with a 25-gallon jacketed boiler for coffee, tea, or soup, and the fourth to a hot closet, measuring 3 feet 6 inches by 2 feet 6 inches by 1 foot 8 inches; thus the 12-inch fire of the kitchenier is supplying heating power for all these appliances, measuring 11 feet long, and embracing, besides the kitchenier, as illustrated, which contains two ovens, two hot closets, wrought-iron boiler and hot plate, a steaming apparatus with two large steam-kettles, a 25-gallon boiler, steam-closet, and another hot plate, the consumption of coal when in full work being only about seven pounds per hour. Notwithstanding all the new ones that have been introduced, Yorkshire pattern ranges still hold their ground extensively in the North of England. The improvements, however, made by this firm, while retaining the old features in the main, have added to their effectiveness. One of the special advantages claimed for the "Thorncliffe" is that by the peculiar arrangement of the flues the heat ascends much slower, consequently more is got out of the fuel; or, in other words, heat that in many ranges is allowed to pass away without giving off its full caloric, is here arrested in its progress, and its full



power obtained. The fire-doors of these ranges are made to admit a large volume of heated air, which not only promotes combustion but tends to the reduction of smoke.

*Mr. Henry Thompson.*

This gentleman, of 29 Marquess Road, Canonbury, to whom we called attention in a previous report of the Health Exhibition in connection with an open-fire domestic grate, in which the fuel is "coked" in a chamber at the back, and allowed to fall automatically to the front portion of the fire at the bottom, has since the opening of the exhibition perfected his arrangement in such a manner as to make it applicable to a kitchen range. We append an illustration of the range in elevation and section. The former



differs in no wise from any ordinary kitchener, the only difference at all in it being the addition of Mr. Thompson's patent coking-box and apparatus at the back of fire. As our description of the sitting-room grate must be fresh in the minds of most of our readers, we need only now say that the arrangement here is exactly similar. The fuel is coked in the chamber at back; the hydro-carbons pass through a grating behind down into a highly-heated chamber, where, mixing with a copious supply of oxygen at a high temperature, the whole passes upwards through the fire and is almost entirely consumed, the merest shade of smoke only being visible at any time from Mr. Thompson's smoke-pipes. In adapting his invention to kitchen ranges, Mr. Thompson has struck at one of the principal roots of the smoke nuisance, for we well know that kitcheners have hitherto presented one of the most difficult objects of attack to the "smoke sanitarian," if we may be permitted to use such a term. Indeed, Mr. Thompson's invention is so simple that it may be easily adapted to most existing kitchen ranges without unsettling, and the saving of fuel, besides the "saving" of smoke, would soon be very perceptible to the owner.

*The Sanitary Engineering and Ventilating Co.*

In the vestibule at No. 1,010, the SANITARY ENGINEERING AND VENTILATING CO., 116 Victoria Street, S.W., exhibit several diagrams which should interest the householder. They consist of improved self-cleansing cisterns and cistern filters, aerating silicated carbon filters, air-cleansing arrangements in connection with inlet ventilators, and a book, which will be found in the library, and that may be read with interest, named "Sanitary Science and Practice."

*Messrs. Udal & Co.*

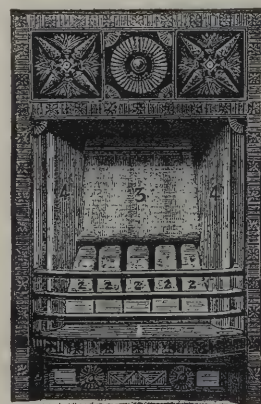
At 701 Messrs. UDAL & CO., of Birmingham and Charterhouse Street, E.C., are showing Bruce's patent fanlight and casement opener. A substantially-built working model of a conservatory, with the arrangement fitted to the side and roof-lights, demonstrates in the clearest manner its simple and efficient action, and which, having been described on previous occasions in the columns of *The Architect*, leaves little more to be said of it. We may, however, mention that it dispenses with cords and springs, combines an effective fastener and opener, is self-locking, and applicable for doors as well as for all kinds of window casements, louvres, ship-posts, &c., and by it a heavy or light sash can be manipulated with equal facility. As we have said, it is actuated entirely by levers, one determining the movements of the whole, and the window or casement can be set at any angle by simply turning a thumb screw. It is also suitable for dome top fan-lights, the only additional means here used being a cogged quadrant and rack. Another salient feature is the small amount of working space required. The opener is adapted alike for public or private buildings.

*Messrs. Houghton & Co.*

At Stand 471 is an interesting exhibit, contributed by Messrs HOUGHTON & CO., of Sloane Terrace, S.W. The articles shown are of an original character, though some of them have been before the profession long enough to give them a reliable character. These are the patent fat interceptor, made in various sizes, an improved gully for baths, waste sinks and surface drains, and a good stable gully. There is, perhaps, no greater nuisance to deal with (particularly in the case of hotels, restaurants, &c.), than fat, and an appliance that will collect this before it reaches the drains in an effectual manner is by no means to be despised. So well has Mr. Houghton's fat interceptor accomplished its purpose, that we have seen it incorporated in what have been called model systems of drainage by sanitary engineers in different parts of the country. The firm also exhibit several specimens of faulty plumbers' work, collected from different places where they have been called in to rectify nuisances; and did we not know how irregular sanitary work has in years gone by been carried on, we should feel surprised at what is here shown, but seeing that the plumber of bygone days in too many instances possessed neither practical knowledge nor conscience, we can only pass them by as things of the past, and hope for better results in the future.

*Jaffrey's Patent Grate Company.*

In the east quadrant, No. 438, JAFFREY'S PATENT GRATE COMPANY, 6 Charing Cross, exhibit the open-fire domestic grate known by this title. This grate, made on smoke-consuming principles, was fully described in *The Architect* in connection with the Building Exhibition held at the Agricultural Hall in April last, shortly after its introduction into London. It is shown in action here, and a better or clearer fire we could not wish to see. Our illustration depicts a flat-fronted grate, but they are made "re-



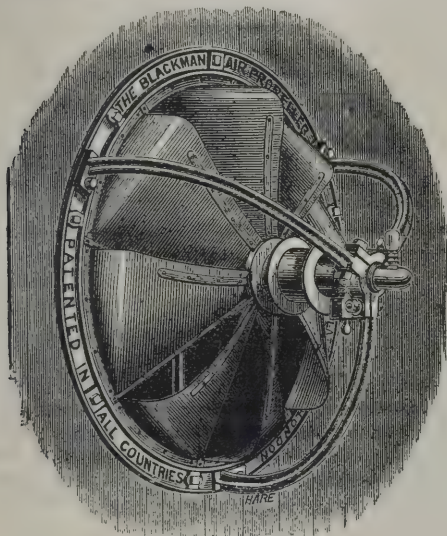
cessed," and with various kinds of ornamentation such as tiles, &c. Since our last remarks upon the Jaffrey grate, several of them have been supplied to public schools and hospitals, and with hot-air chambers at back and sides, one arrangement that has been carried out for a hospital being rather different from that usually adopted for supplying fresh warmed air to a room. In all cases the grate is made with a cast-iron back and sides, leaving sufficient space for a good-sized air-heating chamber. A series of gills are cast upon this casing to arrest the progress of the air (which is introduced from the outer atmosphere at the bottom) in its upward course, and so accumulate heat ere it leaves the discharge aperture. The back gills are fixed at a slight inclination to carry the air more freely to the side chambers, and, on reaching the top, it passes out by a 4-inch opening, and in the new arrangement a stoneware pipe is used which has been let into the brickwork of the wall, and carried to a point adjoining the window, where it escapes into the room by a perforated opening or ventilator. The idea for this "new departure" is that as windows lower the temperature of an apartment both by means of the glass and the



nooks and crannies in the woodwork, draughts are admitted, but by carrying the warmed air as near as possible to these, their temperature is raised at the moment of ingress, and the draughts considerably counteracted. The suggestion is by no means a bad one, and, where new houses are being built, the arrangement may be carried out without difficulty.

#### *The Blackman Air-Propeller.*

Amongst the machinery in motion in the western gallery, and assisting materially to lower the temperature of the surrounding space, will be found the BLACKMAN AIR-PROPELLER COMPANY, whose show-rooms are in Fore Street, E.C. We have described this invention on a previous occasion, but as it appears to be attracting considerable attention and to be in increasing demand, we offer no apology for reverting to it again. Although a means for providing a large amount of ventilation in a certain manner, it is not a "system" of ventilation according to the ordinary acceptance. It is an appliance for keeping in circulation large bodies of air, and will either admit fresh, or withdraw vitiated air in large quantities. It is specially adapted for manufactories, mines, &c., where the air of the places requires to be constantly changed. Although it requires to be worked by power, a very small motor will effect a great amount of work. It is, as our illustration shows,



simply a fan, the blades of which are so shaped that according to the manner in which it is fixed, that is to say, inwards or outwards, so it extracts or brings in air, and herein lies the secret of its success and capabilities. It will be found an invaluable article in factories where the work carried on causes large bodies of dust or "fluff" to arise, to the injury of the workpeople employed; but although mainly introduced for such purposes, we can see many other uses to which it may be advantageously employed, for its worth does not entirely consist in the rapid change of atmosphere. If worked at a less advanced speed it may be used with success in public rooms, &c., and with one arranged to let in fresh air and another to carry off the vitiated, good results may be obtained at a small expenditure of power, and we see no reason why the propeller should not be made of smaller diameter to meet the requirements of theatres or smaller rooms in which entertainments are carried.



#### **The Coming Renaissance.**

SIR,—In your article last week on "The Coming Renaissance," you ask pertinently, "What is the coming Renaissance to be?" Pray allow me to offer briefly an answer to this pregnant question. It has often been urged apologetically on behalf of architecture, that not being an imitative art in direct communion with nature, it cannot prove itself by the test to which the sister arts can always appeal. This plea is but half justified. It gives no valid reason why architecture has in recent times been so helplessly the sport of every fashion in practical antiquarianism. In literature, painting, music, or sculpture, such homage at the shrine of mimicry would have been intolerable. Imagine, *e.g.*, "Pickwick" written in the language of Chaucer! The absurdity of the idea is apparent at its mention; yet architecture for the past 40 years has been practised on such terms, and on such grounds called an art.

The Renaissance of the eighteenth century knew nothing of men such as Pugin, Viollet le Duc, Baron Leys, or Thorwaldsen, whose names suggest nothing more than the study of echoes.

Architecture can, if it will, always know its own position in the

art. This by the greater or lesser degree of its concord with contemporaneous painting and sculpture, and through them only its vital relations with nature.

The coming Renaissance in architecture will be that phase of it which is most modern and which most discourages antiquarianism, in favour of modern painting and sculpture in their latest and highest advancement; in other words, we may take our lesson from the harmony of the arts in France at the present day, where antiquarianism is practically unknown.

I am, Sir, your obedient servant,

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#### **REVIEWS.**

EARTHY AND OTHER MINERALS AND MINING. By D. C. DAVIES, F.G.S. Crosby Lockwood & Co.

There are few sciences which are less popular than mineralogy. One reason is the difficulty of finding opportunities for study. Even in the metropolis the public collections were not accessible to the student until quite recently. The second difficulty arises from the classification. There is no recognised system, and every author can invent a nomenclature of his own. Hence many students lose much time in learning and unlearning catalogues of dry names, and they become disheartened. Mr. Davies follows Dana's arrangement, which somehow finds more acceptance in England than elsewhere, but of course introducing those minerals which have been lately discovered. He looks at the subject from the miners' point of view, and has nothing to say about faces and angles, which to a scientific mineralogist are of more interest than the practical uses of a crystal. Mineralogy is widely related, and a book on the subject must give as much attention to jewels as to building stones. Mr. Davies is comprehensive in his treatment, and, in consequence, there is more in his book which an architect and a builder can utilise than might be inferred from the title. The author has had experience in quarrying, and lately opened a quarry of very tough slate rock in Montgomeryshire, which is to be used in the construction of the new Liverpool water-works. As the minerals that have been utilised in Europe, Asia, and America are described the book may be said to have universal interest, and no colonist should be without a copy.

TEXT-BOOK ON PRACTICAL SOLID OR DESCRIPTIVE GEOMETRY. By D. D. LOW. Longmans & Co.

The difference between this country and France in estimating the utility of descriptive geometry may be judged from the volumes which are found in the Christian Brothers' collection at South Kensington. They are intended to be used by boys who will be artisans, but they are more elaborate than those which are used by professional students in England. Mr. Low, who has published a treatise on the subject, claims consideration because it is small. There is some difficulty in obtaining for descriptive geometry that interest to which it is entitled, and it is only by tact on the part of the teacher that the rudiments can be mastered by the majority of pupils. Mr. Low has adopted the plan of introducing a great number of exercises after every problem where they are necessary, and in this way the student is prepared to deal with the examination papers, which are also given. The author appears to be qualified to treat the subject, and the book, if not exhaustive, is equal to the requirements of ordinary students.

NOTES ON PICTURES IN THE OLD PINAKOTHEK AT MUNICH. By CHARLES L. EASTLAKE, F.R.I.B.A. Longmans & Co.

It is needless to speak of the importance of the collection of paintings which is in the Pinakothek at Munich, having been brought there from several of the Bavarian galleries and elsewhere. So many styles are represented that there was reason to paint the ceilings with figures that were typical of the history of art. Mr. Eastlake has prepared a volume of Notes, which will enable visitors to discover the most interesting pictures, and will suggest the best qualities in them. The descriptions are pithy, and the criticisms are given without bias. If there are defects they are not concealed. A book inspired by such a straightforward style and so much knowledge must have an influence on travellers, and overcome the insincerity of the praises which are often heard in galleries. The type has been well chosen for its size and legibility. There are many illustrations of a diagrammatic character.

PERSPECTIVE EXPLAINED AND ILLUSTRATED. By GEORGE SYDENHAM CLARKE, Captain R.E. E. & F. N. Spon.

The title-page of this book bears 1884 as the date of publication, otherwise it might be supposed to have appeared many years ago. The majority of the examples are worked out in a way that was in vogue thirty years since, and the old-fashioned style is not improved by having some of the diagrams turned upside down. The principal defect is the cumbrousness of the solutions. Such a problem as is represented in figure 15 could be solved with far fewer lines. It is impossible to teach the whole art of perspective in fifty pages, and abstracts like Captain Clarke's do not shorten the student's difficulties.



### WORKS IN PROGRESS.

**Messrs. C. Isler & Co.**, of 88 Southwark Street, London, S.E., are now engaged fixing a 16-inch boring for the Hydraulic Engineering Company, at 110 Cannon Street, E.C. They are also engaged in deepening a well in the solid rock at the Anchor Brewery, Stonehouse, Devon.

**The American Elevator Company** obtained the contract for one first-class passenger lift to be erected in the new office buildings of Messrs. Mark Patrick & Sons, in Warnford Court, opposite the Stock Exchange, and of which Mr. Charles Reilly, is the architect. This is to be a "Standard" hydraulic lift, and will be a fair type of those which are now in general use in office buildings in New York and the United States. The car will also be of the most approved American pattern, and will serve to show its occupants the style which is usually adopted in that country.

### NEW BUILDINGS.

**Berkhamsted.**—The new banking premises for the London and County Banking Company, Limited, lately erected by Messrs. Taylor & Grist, builders, of Aylesbury, from the designs of Messrs. Batterbury & Huxley, architects, of Berkhamsted and London, were opened on Wednesday for business.

**Public Buildings, Kirkwall.**—The foundation-stones of the Municipal Buildings and the Masonic Hall have been laid. Both buildings have been designed by Mr. T. V. Peace, architect, Kirkwall. The site of the town hall is opposite St. Magnus's Cathedral, and the style adopted for the building is Scottish Baronial. The contractors are Messrs. Baikie & Son. The contract for the Masonic Hall has not yet been let. The ventilation will be by Boyle's air-pump ventilators.

**Assembly Rooms, Edgbaston.**—This building is nearly completed. The site at the corner of the Hagley and Francis Roads presented some difficulties, as it resembles a right-angled triangle. A broad staircase leads to a suite of rooms consisting of a ball-room, measuring 70 feet by 40 feet, drawing-room, galleries, refreshment-rooms, &c. On the ground floor is a supper-room of the same size as the ball-room. A restaurant forms part of the building. The construction and furnishing will cost about 11,200*l.* The works have been carried out by Mr. John Bowen, under the direction of the architects, Messrs. Osborn & Reading, Bennett's Hill, Birmingham.

### NOTES ON NOVELTIES.

**Artificial Granite Paving.**—With the number of materials for paving now in the market, it is not to be wondered at that local boards and vestries are at times in doubt as to which to adopt. They are sometimes induced to try one kind that is favourably brought to their notice; but should this happen to turn out inefficient, it is difficult to persuade them to venture upon another that they are unacquainted with. But, on the other hand, this feeling can be carried to excess; and if they exhibit an indifference to an article when they know nothing of its value, they may be doing an injustice to the ratepayers generally. We do not advocate an indiscriminate use of any or every new material that may be introduced simply because it is recommended by its inventors; but when a material is offered them of which undoubted testimony can be given of its good wearing properties, and that its first cost is less than any other possessing the same advantages, it seems little less than egotistical to ignore it. We are induced to make these remarks owing to a visit we paid a few days since to the neighbourhood of Ealing, to examine some artificial granite pavement that has been laid for about five years, and appears as good to-day as when first put down. We shall no doubt be told there is nothing new in granitic pavement, that it is only concrete in another form, &c. To the first we do not object, but we are not at all disposed to place ordinary concrete in the same category as the pavement of which we are about to speak. And we may reasonably ask how it is that with the advantage that we think can be clearly shown to attach to an artificial granite pavement, that it has not come into more extensive use for footpaths. The reason, perhaps, is twofold; first, the very few who have introduced this substance have confined their operations to stables and such places; and, secondly, that when brought out as a footpath for streets, it was laid down in a manner not suited for such requirements. Mr. William J. Taylor, of Church Street, Chelsea, is one of the few persons who have paid attention to this subject. For about eighteen years he has constantly been employed in laying down granitic footways in yards and stables, which have been set in brick-like form, and ample testimony is forthcoming of the indestructible character of the material as well as of its economic features. A few years since Mr. Taylor commenced to introduce it as a foot pavement, and with this "new departure" his difficulties, so to speak, began. While he could obtain private orders for his pavement in the direction we have named, when it became a question of public footpaths, vestries and local boards had to be appealed to, and in nearly every instance he has been told that if he chose to lay down a certain length at his own expense as a test he may do so.

Even in Chelsea, where he has been an inhabitant and ratepayer for many years, the same answer has been given to his applications, and although he can point to a portion of Ealing where it has been laid for some five years, it has not been of any avail to him. We may now ask what is artificial granitic pavement, and how should it be laid to make it most useful and economical as a footpath? As we introduce it to our readers it is composed of the small chippings of granite obtained from the quarries, mixed with Portland cement, and "manufactured" on the spot in which it is to be used. Granite, as we all know, is the hardest stone, and when mixed with a proper proportion of "Portland" must necessarily make as hard a footpath as anything we can use. But the manner in which it is laid is an important consideration. If set down as asphalt in one continuous range without a break, its disadvantages in a certain sense appear. Supposing it becomes necessary to take up a portion of the footpath to gain access to water or gas-pipes, as in the case of asphalt, a general break-up of the footpath must take place at an unnecessary cost, but if the pavement is laid in blocks of about the size of York stone, and if when laying down care is taken to note where it may be hereafter necessary to raise these blocks, the maximum of difficulties is guarded against. It is in this manner Mr. Taylor lays his pavement. Noting where these pipes occur, a small incision is made at each side of the block and filled up with a material easily removable; this enables the first block to be raised, and the others then follow without difficulty. As the blocks are laid down, a slip of wood about a half-inch wide is placed between each, which gives them the appearance of ordinary paving-stones, and the advantage of Mr. Taylor's plan must be palpable to all. The blocks are 2 inches in thickness, and in place of the smooth surface offered by stone, asphalt, &c., often dangerous, there is always a comparative rough surface in existence, pleasant to the senses while walking over, and decidedly safe under all conditions of weather. It now only remains to speak of the cost. Laid down as we have described, Mr. Taylor's pavement can be set for from 3*s.* 6*d.* to 4*s.* per yard super, and as compared with York stone, artificial stone, or asphalt, we need not say it bears most favourable comparison. Tar pavement may be a trifle less in first cost, but as regards wear in thoroughfares with much traffic, it cannot be taken into consideration. The value then of the artificial granite pavement appears to consist in its being laid in blocks of about the size of ordinary paving-stones, regard being made for taking up in case of necessity, in a proper admixture of Portland cement with the particles of granite, and good workmanship in setting, when, from an economical point of view, we believe it will prove the cheapest foot-paving that can be used.

### GENERAL.

**Sir A. B. Walker** has written to the Mayor of Liverpool offering to defray the entire cost of the additions to the Walker Art Gallery, lately carried out by the Corporation at an expense of 12,000*l.* The gallery originally cost 6,000*l.*

**A Nave Porch**, designed by Mr. Sidney Gambier Parry, has been erected at the parish church, Bishopstone.

**A Peal of Bells** is to be placed in Hagley Church as a memorial of the rector, the late Canon Lyttelton.

**The Somerset Archaeological Society** held its annual gathering at Shepton Mallet on Tuesday and Wednesday. Mr. E. A. Freeman delivered the inaugural address on architectural restoration.

**Messrs. Robert Boyle & Son**, ventilating engineers, of 64 Holborn Viaduct and Glasgow, have been awarded the highest and only prize (silver medal) given for ventilators at the International Exhibition, London, for their patent self-acting air pump ventilators and system of ventilation.

**The Earl of Moray** has sent a subscription of 1,000*l.* to the Edinburgh University Buildings Completion Fund. His lordship had already subscribed 1,525*l.*

**A Lattice Bridge**, 80 feet span, is in course of erection over the ornamental water opposite Clarence Gate in Regent's Park. It will open a direct communication between Hyde Park Corner and the Zoological Gardens.

**The Police Report for 1883** states that 21,110 houses were built during the year, forming 361 new streets, and one new square, covering a distance of 56 miles and 84 yards. The operations of the building trade were rather restricted, the number of new houses and the mileage of the new streets showing a considerable decrease as compared with the previous few years, although, as compared with 1873, the number of houses increased threefold, and the length of the new streets more than doubled.

**The Gold Medal** of the International Exhibition, Crystal Palace, 1884, has been awarded to Messrs. Le Grand & Sutcliff, artesian well engineers, of 100 Bunhill Row, London, for their well-known "Abyssinian" tube wells and artesian boring appliances. Some indication of the wide extent of the well-boring operations of this firm is shown from the fact that, within the last few years, the aggregate number of feet of artesian wells bored by them amounts to between three and four miles. This is exclusive of borings for hydraulic lifts and the smaller "Abyssinian" tube wells sunk, amounting to many thousands of feet.









DESIGN FOR ADMIRALTY & WAR OFFICES



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, AUGUST 30, 1884.

### COMPETITIONS OPEN.

**BIDEFORD.**—Sept. 22.—The Trustees of the Bideford Bridge Trust invite Competitive Designs for the Erection of a Block of Buildings suitable for a Post Office on site of Premises in High Street. Premiums of 20*l*. and 10*l*. The cost of carrying out any of the Designs not to exceed 800*l*.

**BOMBAY.**—Nov. 6.—The Municipal Commissioner of Bombay invites Designs and Estimates for a New Municipal Hall and Offices, which must be sent to his Office by Twelve noon, on Nov. 6. A Premium of 5,000 rs. will be given for the Design most approved of by the Commissioner, with the assistance of a Committee of the Corporation; 3,000 rs. for the second, and 2,000 rs. for the third. The total cost of the buildings is not to exceed 5 lacs (5,00,000 rs.). Mr. E. C. K. Ollivant, Municipal Commissioner's Office, Bombay, or at Messrs. E. W. & R. Oliver, 1 Corbet Court, Gracechurch Street, London.

**REDRUTH (CORNWALL).**—Sept. 13.—*School.*—The Redruth School Board offer a Premium of 25*l*. for the best Plans (Elevation and Detailed Drawings), to be selected by themselves, for a School, to be erected at Trewirgie, Redruth, to accommodate 700 Children (350 Boys and 350 Girls and Infants). Total cost not to exceed 3,500*l*. Mr. Charles Bawden, Clerk, Heanton Place, Redruth.

**STOCKPORT.**—Oct. 1.—Designs are invited for Public Baths. Premiums of £50, £30, and £20. Mr. Walter Hyde, Town Clerk, Stockport.

### CONTRACTS OPEN.

**BATLEY.**—Aug. 30.—For a Warehouse in Tichborne Street, Staincliffe, Batley. Mr. J. T. Law, 64 Commercial Street, Batley, Architect.

**BRADFORD.**—Sept. 2.—For Additions and Alterations to Warehouse, Chapel Street. Mr. William Longley, Architect, Charles Street, Bradford.

**BRADFORD.**—Sept. 9.—For Construction of Station. Plans at the Engineer's Office, Hunt's Bank, Manchester.

**BRIDPORT HARBOUR.**—Sept. 2.—For Building Ten Houses. Messrs. Prior & Alexander, Architects, 17 Southampton Street, Bloomsbury Square, W.C.

**BYFLEET.**—For Building Three Cottages. Mr. Welch, Architect, Chertsey.

**CARDIFF.**—Sept. 1.—For Building Sheds at Ely Paper Works. Messrs. Evans & Owens, Ely Paper Works, Cardiff.

**CHIPPING SODBURY.**—Sept. 2.—For Alterations and Additions to Premises in High Street. Mr. J. D. B. Trenfield, Chipping Sodbury.

**CLAINES.**—Sept. 4.—For Construction of Pipe Sewers, Manholes, Receiving Tank, Engine House, Filter Beds, Roads, Fences, and Works in connection with the Sewerage Scheme of the District. Mr. A. H. Parker, Surveyor, 5 Foregate Street, Worcester.

**CORK.**—Sept. 2.—For Building Additional Wards and Dispensary Accommodation to the General Hospital, Queenstown. Mr. W. H. Hill, Architect, 15 Marlborough Street, Cork.

**CORNWALL.**—Sept. 2.—For Erection of Viaduct in Masonry at Guildford, Hayle, and at Redruth. The Engineer, Paddington Station.

**CROOK.**—Aug. 30.—For Building St. John's Church, Sunnybrow. Messrs. Oliver & Leeson, Architects, Bank Chambers, Mosley Street, Newcastle-on-Tyne.

**DARLINGTON.**—Sept. 9.—For Reseating St. Cuthbert's Church. Mr. Francis Parr, Architect, 6 Duke Street, Darlington.

**DUNDEE.**—Sept. 1.—For Building Engine Shed (286 feet long and 181 feet wide). Mr. Burr, Engineer, Northern Division, Caledonian Railway, Perth.

**GOOLE.**—Sept. 1.—For Building Co-operative Stores, Estcourt Street. Mr. Holton, Architect, Bond Street, Dewsbury.

**GUILDFORD.**—Sept. 3.—For Building Board School for 500 Children, Charlotteville. Mr. William G. Lower, Architect, 106 High Street, Guildford.

**HALIFAX.**—Sept. 8.—For Extension of Passenger Station. Plans at the Engineer's Office, Hunt's Bank, Manchester.

**HALIFAX.**—Sept. 6.—For Building Engine-house and Chimney at the Albert Reservoir. Mr. Escott, Borough Surveyor, Town Hall, Halifax.

**HALTWHISTLE.**—Sept. 3.—For Building Goods Station. Mr. William Bell, Architect, Central Station, Newcastle-on-Tyne.

**HAMMERSMITH.**—Oct. 2.—For Rebuilding Superstructure and Strengthening Hammersmith Bridge, Construction of Temporary Bridge, &c. Sir J. W. Bazalgette, Spring Gardens, S.W.

**KEIGHLEY.**—Aug. 30.—For Building Boundary Wall to Mission Church. Mr. J. B. Bailey, Architect, North Street, Keighley.

**KENDAL.**—Sept. 4.—For Building Mission Room at Storth, Sandside. Mr. Stephen Shaw, Architect, Kendal.

**KIDDERMINSTER.**—For Building Offices and Warehouses, Mill Street. Mr. J. M. Gething, Architect, 7 Church Street, Kidderminster.

**KILLARNEY.**—For Additions to Laundry at Lunatic Asylum. Mr. J. F. Fuller, Architect, 179 Great Brunswick Street, Dublin.

**KILNHURST.**—Aug. 30.—For Building Chancel and Vestry to Church. Mr. T. W. Roome, Architect, Sandhill Grange, Rawmarsh.

**KNOCKADOON.**—Sept. 17.—For Construction of Boat Slip and Platform, Rook Excavation, &c. Office of Public Works, Dublin.

**LETTERKENNY.**—Sept. 1.—For Additions to District Lunatic Asylum. Mr. Morley, Building Surveyor, Commercial Buildings, Dublin.

**LINCHMERE.**—Aug. 30.—For Building Board School and Teacher's Residence. Mr. Edward Eames, Surveyor, Linch, near Midhurst.

**LOCHMADDY.**—Aug. 30.—For Additions to Hotel. Messrs. Kinnear & Peddie, Architects, 3 St. Charlotte Street, Edinburgh.

**MATLOCK BRIDGE.**—Aug. 30.—For Pulling Down and Rebuilding Second Quarter New Central Block of Hydro-pathic Establishment. Mr. George E. Statham, Architect, Wheeler Gate, Nottingham, and Matlock Bridge.

**MINTLAW.**—Sept. 2.—For Building Dwelling-house at Station. The Engineer, Waterloo Station, Aberdeen.

**NELSON.**—Sept. 5.—For Additions and Alterations to Methodist Chapel. Mr. Thomas Bell, Architect, 14 Grimshawe Street, Burnley.

**NEWPORT.**—Aug. 30.—For Erection of Buildings for the Patent Fuel Company. Mr. B. S. Jacob, 71 St. Mary Street, Cardiff, and Hull.

**NOTTINGHAM.**—For Building Board School for 960 Children, Carlton Road. Mr. A. N. Bromley, Architect, Weekday Cross, Nottingham.

**PATCHAM.**—Sept. 1.—For Building Engine House, Coal Store, &c. Messrs. Easton & Co., 11 Delahay Street, Westminster.

**RIPPONDEN.**—Sept. 1.—For Building Villa. Mr. S. Wilkinson, Architect, Sowerby Bridge.

**ROCHDALE.**—Sept. 1.—For Additions to Chapel. Mr. Benjamin Heape, 7 Baillie Street, Rochdale.

**SEAHAM HARBOUR.**—Aug. 30.—For Building Co-operative Store, Manager's House, and other Buildings. Mr. George R. Forster, Architect, Seaham Harbour.

**SHEPTON MALLET.**—Aug. 30.—For Building Sexey's County School at Doptling. Mr. G. J. Skipper, Architect, Opie Street, Norwich.

**SHIPTON-UNDER-WYCHWOOD.**—Sept. 6.—For Building Beaconsfield Hall. Mr. T. Brookes, Shipton, Chipping Norton.

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

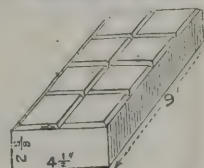
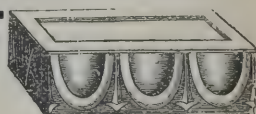
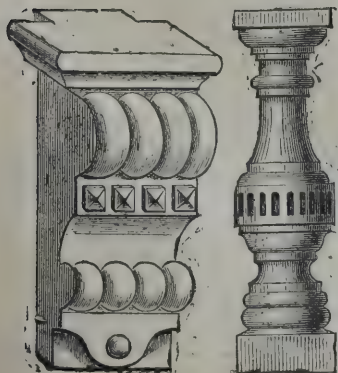
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**SOUTH SHIELDS.**—Sept. 1.—For Erection of Dwarf Wall with Iron Palisading and Gardener's House, at the Lawe. The Borough Engineer, Chapter Row, South Shields.

**STANWIX.**—Sept. 5.—For Building Board Schools and Master's House. Mr. C. J. Ferguson, 50 English Street, Carlisle.

**STRINGS.**—For Building Two Brick Cottages. Mr. Charles Hague, Crown Inn, Hawkgreen, Marple.

**SUNDERLAND.**—Sept. 1.—For Building Methodist Schools, Chester Road. Mr. Joseph Shields, Architect, Blackett's Buildings, Sunderland.

**TODMORDEN.**—Sept. 26.—For Construction of Reservoir, Ramsden Clough. Mr. James Farrar, C.E., Market Street, Bury.

**TUNSTALL, NEAR ACLE.**—Sept. 3.—For Building Stable, Wagon Lodge, Piggeries, &c., Church Farm. Mr. Arthur J. Lacey, Architect, Orford Hill, Norwich.

## TENDERS.

### ABERDEEN.

For Building Boiler and Engine Houses, &c., at Cults. Mr. W. BOULTON, Surveyor, Aberdeen.

#### Accepted Tenders.

Duguid, builder	£1,513	1	6
Dinnes & Middleton, joiner	322	1	0
Pirie, slater	48	13	11
Smith, plumber	44	9	9
Garvie & Son, painter	30	17	6
Stephen, plasterer	11	0	0

All of Aberdeen.

### ABERSYCHAN.

For Construction of Road (44 chains) with Walling, Fences, &c., Abersychan. Mr. E. COOKE, Surveyor.

Pickthall & Sons, Merthyr Tydfil	£1,341	7	8
Thomas, Pontypool	1,175	10	6
Cullimore, Abersychan	1,112	0	0
Thomas & Jenkins, Trevelin	1,088	0	0
Adamson, Tredegar	965	0	0
Chapman, Pontnewynydd	950	0	0
Williams, Fochriw	897	18	4
Pearson, Merthyr	833	2	0
CABLE, Abersychan (accepted)	824	17	6
Surveyor's Estimate	863	13	4

### BIRKENHEAD.

For Works, Beckwith Street to St. Anne Street, Birkenhead.

Peen, Seacombe	£463	10	6
Chadwick, Liverpool	431	11	0
Gass, Birkenhead	415	13	0
Jones, Birkenhead	398	18	3
Maddocks & Co., Birkenhead	381	0	0
Povall, Birkenhead	361	14	4
Riddell, Birkenhead	358	9	1

### BRENTFORD.

For Alterations and Additions to No. 173 High Street, Brentford, for Mr. Geo. Stone. Mr. CHAS. J. GLADMAN, A.R.I.B.A., Architect.

Gibson	£384	10	0
Nye	265	0	0
Dorey	258	18	10
Barnes	244	3	10

### CANTERBURY.

For Works of Partial Reconstruction of the Sidney Cooper School Art Gallery. Mr. J. G. HALL, Architect.

Gentry & Son	£693	10	0
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### CARDIFF.

For Erection of Shedding, Horse Boxes, Grand Stand, &c., for the Horse Show, Cardiff.

Lock, Cardiff	£346	10	0
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### CARDIGAN.

For Building Business Premises, Cardigan, for Mr. J. James. Mr. GEORGE MORGAN, Architect, Carmarthen.

THOMAS & LEWIS, New Castle, Emlyn (accepted)	£1,910	0	0
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### COLD KIRBY.

For Erection of Farmhouse and Buildings, Cold Kirby, Hambleton. Mr. BLESSLEY, Architect, Middlesbrough.

#### Accepted Tenders.

Sourr, mason.

Thirkill, joiner.

Mascall, slater.

### CORK.

For Building Twenty Houses, for the Cork Villa and House Company. Mr. ROBERT WALKER, Architect, 17 South Mall, Cork. Quantities supplied.

MARTIN (accepted)	£9,091	8	0
Roberts	8,800	0	0
T. O'Flynn	8,746	5	5
Fitzgerald	8,256	0	0
E. & P. O'Flynn	8,235	0	0
Hill	7,825	0	0
Delany	7,786	0	0

### DERBY.

For Building Houses, Dexter Street, Derby. Mr. R. W. H. MASON, Architect, Derby.

Musgrave	£2,602	0	0
Pemberton	2,458	10	0
Hewitt	2,400	0	0
Hilton	2,395	0	0
Brown	2,364	0	0
Spencer	2,304	4	0
Brown & Son	2,290	0	0
Yeamaus	2,279	0	0
SMITH & WESTON (accepted)	2,218	0	0
Slater (withdrawn)	2,200	0	0

### DARLINGTON.

For Construction of Forcing House, Public Park, Darlington.

Alton	£138	15	0
Stairmand	137	4	9
Richardson & Co.	127	0	0
Denham	110	0	0

### DENTON.

For Branch Stores and Dwelling-houses for the Denton and Haughton Co-operative Society, Limited, Denton, near Manchester. Mr. T. COOK, Architect, Surveyor, &c., 8 Victoria Buildings, Victoria Street, Manchester. Quantities by the Architect.

Sandam & Thomson, Fairfield	£3,255	10	0
Turner, Knutsford	2,900	0	0
Rome, Manchester	2,727	0	0
Macfarlane & Co., Manchester	2,599	0	0
Butler & Carson, Manchester	2,580	0	0
Haughton, Godley	2,550	0	0
Robinson & Parker, Hyde	2,527	0	0
*Brown, Salford	2,435	0	0
Warrington, Newton Moor	2,407	10	0
Holland, Pendleton	2,425	0	0
*Williams, Manchester	2,397	0	0
*Whittell, Manchester	2,350	0	0
Burgess & Gault, Manchester	2,350	0	0
Haynes, Hulme	2,325	0	0
Cuzner, Staleybridge	2,312	0	0
Aughton, Dukinfield	2,300	0	0
CLAYTON, Denton (accepted)	2,300	0	0
Robinson, Hyde	2,290	0	0
Storer, Denton	2,290	0	0

\* Too late.

### GRAYS.

For Erection of a Shop and Bakehouse at William Street, Grays, for Mr. J. R. Banks. Mr. E. CLERK ALLAM, M.S.A., Architect.

BROWN (accepted)	£868	0	0
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### GRAYS THURROCK.

For Erection of Additional Schoolrooms and Infant Mistress's Residence at Quarry Hill Board School, for the Grays Thurrock School Board. Mr. E. CLERK ALLAM, M.S.A., Architect.

Stafford, London	£6,298	0	0
Seager, Gravesend	4,570	0	0
Thompson & Tweed, London	3,279	0	0
Wood, Chelmsford	3,182	0	0
Mower, London	3,035	0	0
Webb, London	2,925	0	0
Hawkins, London	2,741	0	0
Aldridge & Jenvey, London	2,683	0	0
CARTER, Grays (accepted)	2,635	0	0

### KETTERING.

For Erection of Sewerage Works, Kettering. Mr. R. W. JOHNSON, Surveyor, Kettering.

Cooke & Co., Battersea	£5,590	0	0
Corrie & Co., Litchfield	5,327	0	0
E. Barlow, Rothwell	5,273	0	0
Sanders, Southampton	4,748	0	0
Dickson, St Albans	4,800	0	0
C. & F. Henson, Kettering	4,850	0	0
F. Barlow, Kettering	4,168	10	0
G. V. HENSON, Kettering (accepted)	4,100	0	0

### LEICESTER.

For Erection of Vicarage House for St. Nicholas's Church, Leicester. Mr. THOMAS P. BOWN, Architect, New Street, Leicester.

TEBBATT (accepted).

### LIVERPOOL.

For Heating Apparatus, Newhall Hill Church, Birmingham.

RENTON GIBBS, Liverpool (accepted).

For Heating Ladies' School, The Mount, Malvern.

RENTON GIBBS, Liverpool (accepted).

### LLANDOVERY.

For the Renovation of the Baptist Chapel, Llandovery, South Wales. Mr. GEORGE MORGAN, Architect, Carmarthen.

HUGHES (accepted)	£245	0	0
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### LONDON.

For Works to Roads, &c., at Workhouse and Infirmary, Kensington.

Mears	£1,532	0	0
Nowell & Robson	1,497	0	0
MOWLEM & Co. (accepted)	1,320	0	0
Architect's Estimate	1,300	0	0

For Erection of Studio, Golder's Hill, Hampstead, for Sir J. Spencer Wells, Bart. Mr. ARTHUR VERNON, Architect, 26 Great George Street, Westminster and High Wycombe.

BIRD (accepted)	£316	0	0
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For Completing Five Houses, Gascony Avenue, Kilburn, for Mr. Geo. Gladman. Mr. CHAS. J. GLADMAN, A.R.I.B.A., Architect.

Falkner	£1,275	0	0
Barnes (too late)	1,232	2	9
Pryor	1,175	0	0
Barnett	1,050	0	0

For Alterations and Repairs to No. 34 Baker Street, for Mr. Arthur Canton, L.D.S. Mr. CHAS. J. GLADMAN, A.R.I.B.A., Architect.

D. D. & A. Brown	£217	0	0
J. Brown	875	13	0
Langridge & Sons	800	0	0
Styles & Sons	295	0	0
Falkner	257	0	0

For Rebuilding No. 321 Strand, W.C. Mr. T. E. KNIGHTLEY, Architect. Quantities by Messrs. Batterbury & Huxley.

Kiddle & Sons	£3,900	0	0
J. & J. Greenwood	3,739	0	0
Wall	3,666	0	0
Brass	3,467	0	0
Patman & Fotheringham	3,385	0	0
Ashby Brothers	45		

### LONDON—continued.

For New Station, Upper Street, Islington, for the London Salvage Corps. Mr. WIMBLE, Architect.

Dove Bros.	£13,675	0	0
Scriveners & Co.	13,615	0	0
Grover	13,384	0	0
Bird	13,289	0	0
Greenwood	12,993	0	0
Laurence & Sons	12,771	0	0
Morter	12,737	0	0

For Erection of a 40-quarter Brewery at Vauxhall, for Barrett's Screw-stopper Bottling Co., Limited. Messrs. STOKES & Co., Architects, 24A Southwark Street, S.E. Quantities by Mr. F. E. MORRIS, Colchester.

#### Main Building only.

Babb Bros.	£8,230	0	0
Hooper	7,005	5	3
R. & E. Evans	6,598	0	0
Balaam Bros.	6,000	0	0
Watson	5,896	0	0
Hunt	5,656	0	0
Oldridge & Sons	5,650	0	0
Lorden & Sons	5,649	0	0
Cook	5,590	0	0
Manning	5,545	0	0
Howard	5,528	0	0
Gibbons	5,450	0	0
Priestley	5,437	0	0
Jones Bros.	5,402	0	0
Blyton	5,400	0	0
Stafford	5,358	0	0
Scharien & Williams	5,278	0	0
Ansell	5,225	0	0
Croaker	5,195	0	0
Howell & Sons	5,190	0	0
W. W. & H. Brown	5,120	0	0
Higgs	5,080	0	0
Allen & Sons	4,980	0	0
Stephenson	4,978	0	0
Tyerman	4,883	0	0
Dickson	4,816	0	0
Stephens & Bastow	4,730	0	0
DICKINSON (accepted)	4,480	0	0

For Heating Danehurst, Hampstead.

BACON & Co. (accepted).

### LONGTON.

For Building Parish Relief Offices, Longton. Messrs. R. SCRIVENERS & SONS, Architects, Hanley.

Proctor, Tunstall	£1,340	0	0
Wetton, Fenton	1,195	0	0
Bennion, Longton	1,055	0	0
Cornes, Hanley	1,050	0	0
Collis, Longton	1,043	0	0
Barlow, Stoke	1,040	0	0
H. & R. Inskip, Longton	1,020	0	0
Bromage, Fenton	1,000	0	0
Gallimore, Newcastle	985	0	0
Jukes, Longton	954	0	0
Gibson, Tunstall	948	14	0
HANCOCK & TIPPING (accepted)	935	0	0

### MARSTON HILL.

For House at Marston Hill for the Rev. Dr. Bulley. Messrs. WALLER, SON & WOOD, Architects, Gloucester.

	House.	Heating.
Parnell & Son	£6,400	£184
Groves	6,389	189
Collins	6,000	207
Franklin	6,280	176
Clutterbuck	5,644	167

### MEINCIAN.

For Building new Baptist Chapel, Meincian, near Kidwelly, South Wales. Mr. GEORGE MORGAN, Architect, Carmarthen.

DAVIES & JONES, Port Henry, Llanelly (accepted)	£949	10	0
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### MELTON.

For Quorn Hunt Kennels Restoration and Additions. Mr. R. WINTER JOHNSON, Architect, Melton.

Collar & Hickling, Syston	£2,130	0	0
Herbert, Leicester	2,030	0	0
Foster & Dicksee, Rugby	1,930	0	0
Barker, Loughborough	1,838	0	0
Faulkes, Loughborough	1,498	0	0
BLACK, Barrow (accepted)	1,399	0	0

#### Cooking Apparatus.

Barford & Perkins, Feldon	125	0	0
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### NETHERFIELD.

For Sewering Work, Arthur Street, Netherfield, Carlton.

Mr. W. WALKER, Surveyor, Beeston.			
Foster & Barry, Nottingham	£256	0	0
Hawley, Ilkeston	226	10	0
Cordon, sen., Burton Joyce	203	5	0

### NOTTINGHAM.

For Construction of Sewer (1,000 yards), Nottingham. Mr. BROWN, Borough Engineer.

Cordon	£7,436	3	6
Hopkin	4,277	8	6
Foster & Barry	3,900	0	0
Smart	3,545	0	0
Meat Bros. (accepted)	3,490	0	0

All of Nottingham.



**SALTBY.**

For Restoring Nave, Tower, and Porch, Building New Chancel, making Fittings to Saltby Church, Leicester-shire. Mr. H. WOODYER, Architect, Grahams. Woolston, Stamford (accepted). Seven Tenders were received.

**WAKEFIELD.**

For Building Villa Residence, Boundary Walling, &c., in Pinderfields Road, Wakefield. Mr. F. SIMPSON, Architect, Southgate Chambers, Wakefield.

*Accepted Tenders.*

Flower Bros., bricklayer . . . . .	£359 0 0
Bromsell, joiner . . . . .	230 0 0
Rycroft, slater . . . . .	45 10 0
Brooke, plumber . . . . .	99 0 0
Wear, plasterer . . . . .	55 0 0
Goodall & Lister, painter . . . . .	12 15 0
Total . . . . .	£801 15 0
All of Wakefield.	

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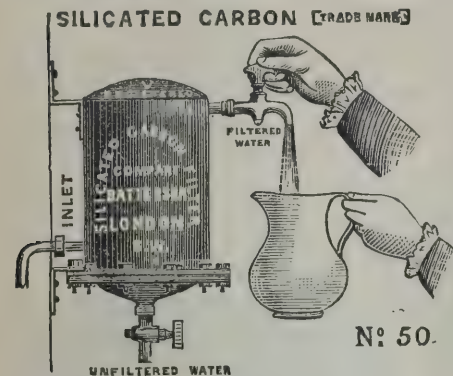
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12 Elm Street, Gray's Inn Road, W.C.

**SURBITON.**

For Construction of Road, &c., Surbiton Estate. Mr. G. POOLEY, Surveyor.  
Carter, Anerley . . . . . £1,155 0 0  
Stickley, Surbiton . . . . . 1,050 0 0  
Chafen, Rotherhithe . . . . . 947 0 0  
Bloomfield, Tottenham . . . . . 925 0 0  
Nicholls, Wood Green . . . . . 895 0 0

**WALLINGFORD.**

For Construction of Waterworks, Wallingford.  
*Contract No. 2.*  
Stevenson, Wantage . . . . . £1,875 0 0  
Ottaway, Oxford . . . . . 1,164 0 0  
EVANS BROS., Wolverhampton (accepted) . . . . . 1,150 0 0  
*Contract No. 3.*  
Griffiths, Reading . . . . . 2,288 0 0  
BRASHER & SON, Wallingford (accepted) . . . . . 2,117 0 0  
*Contracts 2 and 3.*  
Dodman, Lynn . . . . . 3,594 0 0  
Potter, London . . . . . 3,267 0 0

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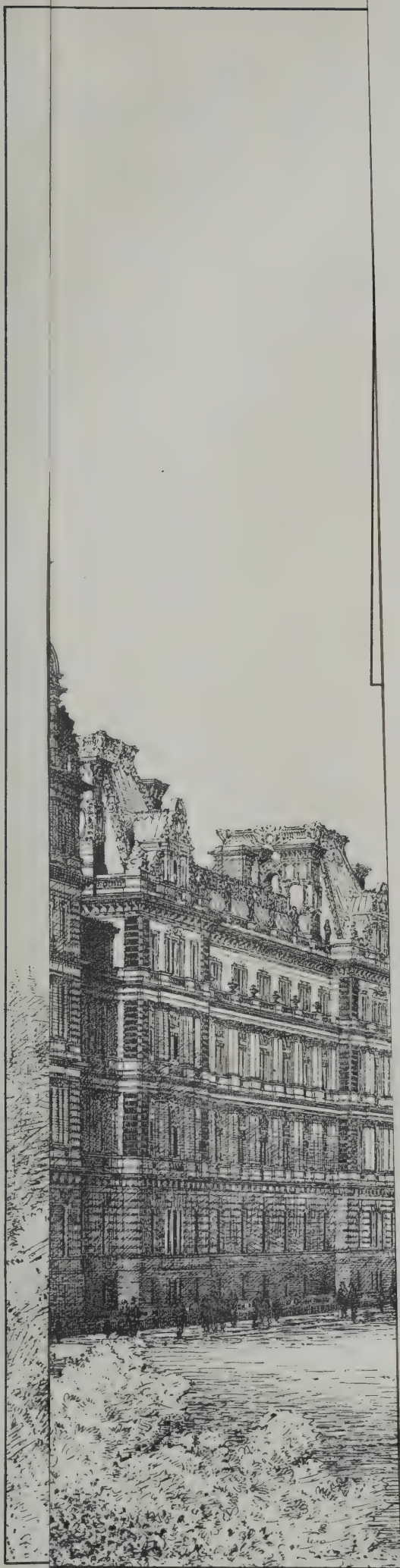
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# The Architect.

## THE HARMONY OF ARCHITECTURE WITH OTHER ARTS.



CLEVER correspondent in our last issue sets forth in very few words a strong point in architectural criticism. Architecture, he suggests, can always know its own artistic condition by simply considering how far it is in concord with other contemporaneous arts; and this rule he applies to English architecture of the present and recent times by shrewdly reminding us that it has always been "the sport of fashion in practical antiquarianism," as contrasted with the state of art in France, "where antiquarianism

is practically unknown."

The contrast between the two nations which occupy the opposite shores of the Channel—one of the most striking instances in the world's history of the abiding intellectual heredity of race—is scarcely in any other matter so well illustrated as in the difference of principle which appears in their architectural design. The remarkable era of the nineteenth century opened, as everybody knows, in the midst of European revolution, a revolt against what remained of Mediæval feudalism, initiated in France but prefigured in British America. It may seem paradoxical to say that one outcome of this was modern Greek architecture on one side of the Channel and modern Gothic on the other; but a little reflection makes it clear enough that this was really so. The passionate emotions evoked by the sudden overthrow of privileged authority seems to have fixed the attention of the French directly and permanently upon the classical antique, which it identified with all the glories of freedom. The distrust, on the other hand, of uncompromising and reckless reform, and a feeling of resentment against the actual violence of its career, led the entirely different intelligence of the English to seek an anchorage in patriotic sentimentality; and when this gave rise, as we can easily understand it would, to a certain reaction in favour of feudal associations, if only of a superficial sort, the way was obviously opened to an eventual rehabilitation of Mediævalism. In the Napoleonic war, looked at from an artistic point of view, France was fighting for an escape from the Mediævalism out of which she had only just emerged by an imitation of the old-world Classicism which it was so easy to regard as the only alternative; whilst England, having escaped from the practical inconveniences of Mediævalism long before, was enabled to set up for an idol her own "good old times," and to do battle for the memory of them with vast satisfaction, and with ultimate success. It does not require in these days a reference to the mere doctrine of the association of ideas to satisfy the student of art history that here there were two diametrically adverse intellectual principles at work, on the opposite shores of a narrow sea, out of whose action sooner or later two diametrically adverse developments of artistic design must, amongst other things, arise.

Thus it is that while PUGIN was so great a success in England, VIOLETT LE DUC (we say it with all respect) has been a failure in France; PUGIN, a mere extatic, too, appealing to "a nation of shopkeepers," and VIOLETT LE DUC, a deliberate philosopher, addressing himself to the most accomplished people in the world. For in France (in the words of our correspondent) "antiquarianism is practically unknown" still; whilst in England it seems impossible to say that we shall ever repudiate its authority. We may even add that in France antiquarian architecture, whenever attempted, has proved to be at the best but a spiritless adventure, whereas in England it has developed, in spite of all inherent faults, into what we may call an authentic counterfeit, the most admirable in its way that has ever been accomplished, perhaps the only really admirable thing of the kind in artistic history.

This being so, we cannot, however, shut our eyes to the obvious truth of the maxim that, when architecture is seen to be in a condition of discordance with the other arts of the same time and place, this cannot be right. In other words,

when the development of the arts in general exhibits a certain inferiority of character, which becomes the natural style of the country and the age, architecture ought surely to follow the same style; any deviation is unnatural; and, wherever an exceptional case is met with, a sufficient reason ought to be assignable for the exception, the *onus probandi* resting upon its defenders.

If we try to apply this maxim to the condition of English architecture at the present day, what do we find? Let us take church architecture. We visit some sufficiently important and good example of a new church; and it is of course at once apparent that the architect has designed it with the most painstaking perseverance of detail in accordance with the corresponding edifices of the thirteenth or fourteenth century. Not only is the imitation of the originals so extremely faithful, and so successful, that we are constrained to acknowledge a vitality in it which is almost equivalent to authenticity, but we perceive that the sculptures of the reredos, the carvings of the enrichments, the glass pictures in the windows, and the figures and foliage in the decorations and symbols, are all executed in a certain peculiar manner which is in full harmony with the architecture, and indeed is found to be equally imitative of the style actually exhibited in the ancient examples. Everything is still so thoroughly characteristic that even the most cynical philosopher, if he be able to understand what he sees, must surely recognise the effect as high art. So far, then, so well; and we go to the exhibition of the Royal Academy to look at the pictures and statuary. Now it is idle for anyone to intercept our progress and take us to the Grosvenor Gallery; a question that need not be entered upon. Whether we accept the judgment of the great majority of successful artists, or that of the public at large, or that of the persons who buy the pictures and statuary, all with one accord will tell us, in spite of Grosvenor Galleries, that the works at the Royal Academy are as matter of fact the true representative works of the country and the age. Do we find, then, that these are in accord with what we have been inspecting—and admiring—at the new church? Most emphatically not. The painting and sculpture of the current age, that is to say, are not by any means the painting and sculpture of the thirteenth or fourteenth century, but of the nineteenth. Therefore, if the architecture of the new church is in accord with the ancient work of the other arts, and this ancient work is out of accord with the other arts of the current age, then it is quite clear that the architecture of the new church is out of accord with the other arts of the day, and consequently an anachronism. How far, then, may this be recognised as a legitimate exception to the rule?

There are many reasons why the architecture of the Church of England should just now take a line of its own, without regarding the example (so to put the case) of the main body of painters and sculptors in the Royal Academy. There are hosts of excellent people throughout the country, as we all know, who cultivate more or less modern ideas of ecclesiastical matters; but the patriotic principle, in the form of an affection for old times, is perhaps in no other way so favourably entertained in England as in connection with the Church. Taking them all round, the English clergy are well deserving of the utmost esteem and love of the people; and no doubt the public confidence in them, within the limits of their own sphere, has long been, and still is, increasing. We need not inquire why it is that the clergy feel it to be desirable in such circumstances to cherish the special kind of patriotic feeling which identifies the fabric of a new church with the sanctity of an old one. But even if this were due to no more profound sentiment than a natural affection for the most interesting of all remains of an architectural kind that such a country as England can possess, this would be quite enough to justify a reliance upon Mediæval design as a means of awakening popular sympathy. In other words, the English people love their old churches; they are pleased to see them "restored" in the old style; and they are pleased to see them reproduced in new churches. Accordingly, throughout the religious movement of the last fifty years, the influence of architecture, as a strictly sentimental art, has been very great, and indeed so much so that, if a change of style were now to be accepted to any considerable extent, it is not too much to say that the interest of the lay public in church building would probably no longer be the same. This, therefore, may be assigned as the reason for regarding our ecclesiastical architecture as an exception to the general rule of the Harmony of the Arts. It need



scarcely be said further that, in such an enterprise as church building, the justification of an exceptional mannerism for architecture proper must obviously be an equal apology for carrying the same mannerism into all the auxiliary works of decoration, ornament, and furniture. The arts of the Church, therefore, if this argument be correct, may fairly be regarded as constituting an entirely separate scheme from the arts of the Municipality or the State.

The adoption of these revived Mediaevalist arts by the English Nonconformists and the Scotch Presbyterians may seem to be, in this view of the case, an unintelligible phenomenon; but it is not so. The reason obviously is that the universal acceptance of the Gothic style in the Establishment, and the artistic success with which its development has been conducted, have caused it to be regarded as the religious style, not of the Church, but of the nation; and (if the jest may be pardoned), just as the popular divine remarked that he could not see why the devil should have all the good music, so even the most hostile promoters of the building of opposition chapels and meeting-houses may be excused for not being able to see why the Establishment should have all the good architecture.

We leave the matter now in the good hands of our readers. The proposition we have so far endeavoured to elucidate is no doubt one of sound philosophy; and perhaps the very remarkable exception which we have so freely commented upon may serve indeed to prove the rule.

### ASSOCIATED DWELLINGS IN FRANCE.\*

THE French are so co-operative by nature or by habit it is a wonder that the principle of association has not been more often applied by them to the erection of buildings, and especially buildings for the working classes. The *ouvrier* of Paris is, as a rule, much worse housed than his London brother, and unless he lives outside the fortifications he has to pay a larger portion of his earnings for what is little more than a place for sleeping. He has, it is true, the advantage which is common to all the inhabitants of enjoying life out of doors, in the hours which remain after his day's work; but should he be compelled to stay in what ought to be his home, he is, according to English notions, surrounded by discomforts. The French builder has a genius for economising space, and whether the workman has one or more rooms they are sure to be small and stuffy. The sanitary accommodation must, from the size of the appartement, be badly placed. "Nous ne comprenons pas," says a French economist, "que bon nombre d'architectes placent les lieux d'aisance aux environs des cuisines." It should be remembered, too, that in most cases the *cuisine* serves also as a dining-room and general living room by day, while at night it is often used as a bedroom for the workman's children, if there are any. Fuel of all kinds and candles are costly in Paris, and a workman is rarely able to expend more than thirty shillings a year for heating and lighting. On a winter's day his room is dark and cold, and is far from being a pleasant abode. It is fortunate for him that in case of illness he is able to enter one of the numerous hospitals. Foreigners consider the Paris workman to be a light-hearted animal who is happy in a blue blouse, and needs nothing beyond what is to be found in a café, or a dancing-saloon, or a picture gallery. But it is impossible for any man who is not a philosopher to be contented with the dwellings which are occupied by the lower orders in Paris, and the gaiety is often no more than an effort to control bitter thoughts. The quietest find little difficulty in joining in the "Chant des Ouvriers," which does not suggest that France is elysium:—

Quel fruit tirons-nous des labeurs  
Qui courbent nos maigres échine ?  
Où vont les flots de nos sueurs ?  
Nous ne sommes que des machines.  
Nos Babels montent jusqu'au ciel ;  
La terre nous doit ses merveilles :  
Dès qu'elles ont fini leur miel  
Le maître chasse les abeilles.

\* "L'Economiste Pratique; Construction et Organisation des Crèches, Salles d'Asile, Ecoles, Habitations ouvrières, et Maisons d'Employés, Hôtels pour célibataires, Cuisines Economiques, Bains, Lavoirs, Cercles populaires, Nourriceries, Maternités, Dispensaires, Hôpitaux, Hospices, Asiles de Nuit, Postes de Secours, Mécanisme de prévoyance et de bienfaisance." Par Emile Cacheux, Ingénieur des Arts et Manufactures. Paris: Baudry et Cie.

When workmen are discontented in Paris it is ominous to the State; and therefore some attempts have been made to remove the grievances which come from defective dwellings. The first experiment appears to have been made in 1848 by M. VALADON. Then the late Emperor, who was an admirer of English institutions, in 1852 obtained an advance of ten millions of francs for model dwellings, but out of that sum not more than a fifth was appropriated for the advantage of working-men. It was said that accommodation was extremely limited. The rooms were so small that the table and the bed had to be turned up, or an occupant could not use the room. Parisians are accustomed to ascend many flights of stairs, but it was objected that the stairs were more numerous in the new buildings, and the tenants regarded themselves as martyrs. The Emperor then constructed some blocks of dwellings on a better system, and they were offered to a society of workmen who were able to subscribe a certain portion of the cost. Afterwards buildings were erected by the society, the money having been borrowed; but it is found that not more than three per cent. interest on the outlay can be gained. It is no wonder that the French capitalists are not eager to embark in similar undertakings.

M. EMILE CACHEUX, a civil engineer living in Paris, has been more fortunate. He has made many experiments, which he relates in a massive volume, that merits the attention of municipalities and philanthropists as well as of speculators. His first operations were at Lilas, near Paris, where he utilised 9,000 square mètres of land. The cheapest houses cost 4,400 frs., or with the site, well, walls, &c., the cost was 6,000 frs.; and M. CACHEUX believes that it is not possible to erect near Paris separate dwellings at a less rate. At Lilas there were four in a block, set back to back in pairs, each having a kitchen and dining-room on ground floor and two bedrooms above. The largest room measured 4 mètres by 3 mètres. In the Impasse Boileau at Passy-Auteuil a row of ten one-storey cottages was erected at a cost of 36,000 frs., and it was transferred without profit to a society by M. CACHEUX. One of the cottages can be obtained by twenty yearly payments of 438 frs. This is after the system of English building societies, which M. CACHEUX is eager to see extended in Paris. He has speculated largely in adopting it, and is satisfied when he obtains five per cent. on his outlay. At the present time a man who follows the example of M. CACHEUX is a benefactor to France. There are many eleemosynary institutions in the country which do not always exercise a beneficial influence, and on the other hand there are speculators who insist on enormous gains. It is apparently difficult to steer midway between almsgiving and avarice, and yet it is only by following such a course that the friends of the *ouvrier* will really aid him.

The need of dwellings is every day becoming more pressing, while the obstacles are increasing. There is, in the first place, the difficulty of finding sites. It is not long since the authorities were considering a project for utilising the ground covered by the fortifications as sites for workmen's houses. It was set aside. M. CACHEUX, who speaks from experience, asserts that "la ville de Paris ne voulut pas favoriser la création d'habitations ouvrières." M. SEILLER offered to erect twelve large wooden houses, if ground was ceded to him gratuitously, but he was obliged to pay a rent of a franc a mètre. The houses cost 105,000 frs. (the State giving 28,000 frs.), and forty-eight families were lodged in them. They consisted of a ground floor and a flat, the approach to the latter being by an external staircase. According to M. CACHEUX the tenants were satisfied with the comfort of the dwellings. But the site was required for some other purpose, and as re-erection would involve a loss of 40,000 frs., M. SEILLER demanded that his engagement should be cancelled. There is something to be said in favour of movable dwellings, and the subject has engaged the attention of several French architects.

M. MAURICE LE CHATRE and M. HENRY BARTHÉLEMY, an architect, have projected the erection of blocks of dwellings near the Parc Monceaux, which would contain 9,000 dwellings. Lighting, heating, as well as furnishing, would be undertaken by the company. There would be workshops, a bazaar for the sale of goods, schools, kitchens, bakeries, a crèche, a pharmacy, &c. Motive power would be supplied from a central engine. It is proposed to make the intending occupiers take up the shares of 2,500 frs., paying from 1 to 5 frs. a week. This will form a very remarkable settlement if it can



be carried out in its entirety. The establishment of a somewhat similar "cité" has been partly realised in the Faubourg St.-Antoine, the buildings having workshops on the ground-floors and dwellings on the upper floors. It is difficult in those cases to say with precision how far the rents would pay, but M. CACHEUX points out that if the City of Paris erected a hundred thousand chambers, there would be a return for the outlay in the increased amount paid for octroi duties, municipal taxes, and other imposts. Elsewhere much has been contributed by the municipal authorities. In Milan, 8,000 mètres of land have been given for sites for houses; in Lille a dividend of five per cent. has been guaranteed on the outlay required for erecting two hundred and fifty houses; Havre has contributed 25,000 frs. for the lighting and water supply of a workman's "cité." With so many precedents, it is likely that Paris will sooner or later endeavour to grapple with a difficulty that is almost as pressing as sewage disposal in London. The French doctors are generally opposed to the crowding of a large number of families under one roof, and they say that in times of epidemic there is an inevitable danger which outweighs the advantages. They join, however, in praise of the Mulhouse system, where there are separate houses and gardens, with public wash-houses and restaurants.

A French woman is expected to be a wage-earner, and whatever improvements may be introduced in the dwellings, the necessity will still exist for crèches, salles d'asile or écoles maternelles, and similar asylums. The second part of the book by M. CACHEUX is devoted to the subject, and several plates are given showing the arrangement of those institutions. In England crèches are only makeshifts, and the premises have not been designed for the use of infants, as they are in France. Judging from M. CACHEUX's book, the organisation is almost perfect, and everything is done to insure the health and happiness of the children. The difference between the two countries is suggested by the contrast between the simple forms which have to be filled up in England and the elaborate documents in use in France.

From the time of infancy a Frenchman is accustomed to live with his fellows in common, and, as he may not have means for cooking in his dwelling, it is not surprising that restaurants should be on a larger scale in France than in England. The French establishment for economical alimentation is almost unknown in this country. In several workshops a cooking apparatus has been set up, by which meals can be supplied very cheaply. In one, where dinners were given to children at 2½d., so exact were the measurements that there was only a deficit of 94 frs., although nearly 600,000 dinners were supplied. Some railway companies have erected refectories for their employes, and throughout the country there seems to be a competition with the restaurant-keepers. A dining-hall in Orleans is 40 mètres, or over 130 feet in length. The cooking apparatus for such places has to be on a corresponding scale, and the cauldrons have to be moved by machinery.

French apartments, for which a high rent is paid, are without any provision for a bath, and, as in other cases, recourse must be had to public establishments. Vapour baths, like those which are to be found all over Paris, do not exist in London. Yet they are admirable sanitary agents. The ventilation is so well managed that the bather is not oppressed by the heat. There is a greater variety of douches and showers than is to be found in an ordinary English bath, and the charge for admission is moderate. A vapour bath is, however, in the opinion of physicians, less efficacious and less safe than a Turkish bath, but it is cheaper to maintain, and this may explain its popularity in France.

There are other structures described by M. CACHEUX, such as clubhouses for workmen, dispensaries, economical hospitals, night asylums, and the like. His book suggests some of the differences between French and English architectural practice. Abroad it is necessary very often to provide for the accommodation of a large number of people. When men are in the habit of living so much together, it is natural that they should go a step further and become Socialists in one form or another. In our eyes there is little difference between some of the modern institutions of France and the phalansteres, which COULOMB GENGEMBRE designed for the Fourierists. In both economy of labour and expenditure was sought, and the planning was devised to attain that end. According to Mr. MILL, Fourierism recognised separate *menages* for all who preferred them, and no other community of living than that all the members should reside in the same pile of buildings, and

transact their buying and selling through as few agents as possible. The proposed "cités" and such towns as Mulhouse are practical illustrations of the principle, although all connection with Fourierism would be disowned. The buildings which are erected in modern France indicate the spirit of the age, and to-day, as during all past time, architecture becomes a revelation of thoughts which are otherwise unexpressed.

## ART EXHIBITION IN BRIGHTON.

A LOAN exhibition is about to be held in Brighton, with a view of obtaining funds to reduce the debt on the local art school which was opened in 1877. The exhibition will be on a large scale, and sufficient promises have been received from the owners of art treasures to justify the expectation that the exhibition will be the most comprehensive and interesting ever held in the county. The town council have given the use of the Corporation Picture Gallery, which will be lighted by incandescent electric lamps, and the Corn Exchange, whilst the authorities at South Kensington will also assist the scheme. Amongst those who have consented to assist the committee in selecting the works offered for exhibition will be:—Sir Philip Cunliffe Owen, Mr. J. C. Horsley, R.A.; Mr. Alma Tadema, R.A.; Mr. H. S. Marks, R.A.; Mr. Frank Holl, R.A.; Mr. P. R. Morris, A.R.A.; Mr. H. G. Hine, Mr. J. S. Forbes, and Mr. W. C. Quilter. Besides the paintings it is proposed to include in the collection in a separate department a feature to some extent suggested by the reproduction of Old London in the Health Exhibition, in the shape of a series of apartments furnished and fitted up to represent different periods of English domestic art, manners, and customs, the periods selected being the time of Elizabeth, the Puritan period, the Queen Anne period, and the time of the Georges.

## THE ARCHÆOLOGY OF PEMBROKESHIRE.\*

BY THE LORD BISHOP OF ST. DAVID'S.

I THINK the British Archæological Association has done wisely in choosing this small area as the field of its operations this year, and all the more wisely that it is so small. It has been, as I venture to think, a weak point in the arrangements of our greater archæological societies that at their annual meetings the members have been invited to travel over so much ground, and to go far afield, neglecting in some cases that which lay at their doors. I think the local societies have in some cases had an advantage over the two general societies in doing their local work more minutely and thoroughly, and in giving their members an opportunity of examining every inch of the ground. At the present meeting the Association will be compelled to act on the principle hitherto observed by the local societies by the exigencies of its present geographical position. For, except in one direction, it cannot go very far from Tenby without getting into the sea, or being entangled in the long tentacles of Milford Haven. So whatever we have to do we hope to be able to do it well. And now let us see what we have to do. I suppose we may, with sufficient accuracy for our present purpose, make a rough fivefold division of material antiquities according to date. I think it will not be inconvenient to classify them as primeval, Roman, post-Roman, mediæval, and post-Reformation, the last being, no doubt, a very awkward term, but I do not know how to express the notion better. The name, however, is unimportant, and the more so that I do not intend to refer to any memorials of that period. I have already said that the division is a rough one; the distinction of periods is not clearly defined, and they sometimes overlap one another. For it is plain that certain antiquities, which we call primeval, may date from or even after the Roman occupation of Britain. Some of the early Christian monuments, which we call post-Roman, may have had their origin during that occupation, although I do not suppose that any of them did. It is very hard to say where we are to place the beginning of the middle age, although it is perhaps not so hard to distinguish between the decay of Roman and the development of Mediæval art, while the latter did, as a matter of fact, linger on in some places even into the seventeenth century. Still, I think we must be content with the classification which I have made for lack of a better.

### *Prehistoric Remains.*

In primeval remains, Pembrokeshire is unusually rich; but, although the district in which Tenby stands is not without them, they are most abundant in the northern and north-western parts of the county. They may be divided into villages, fortresses, sepulchral remains, and early roads or track-ways. A good specimen of the first class was discovered not many years since on Stackpole Warren, and to this the attention of the Association will

\* An address delivered at the opening of the forty-first annual congress of the British Archæological Association at Tenby on Tuesday last.



be directed at its present meeting. Fortresses occupy many of the peninsular headlands of the Pembrokeshire coast, and many eminences in the interior. Some of them are of great size and complexity, and show considerable military skill. In some cases we have the fortress and village combined. Perhaps the best example of this combination in South Wales is visible in the well-defined village-fort on St. David's Head, where the foundations of the circular houses, forming a considerable group, are defended by a system of concentric walls, of which the masonry forming the face is in some places well preserved. By what race, or by what succession of races, these hill and cliff forts and villages were built, whether they belong to one age or many, whether they are not some of them post-Roman, whether they were used as places of permanent abode, or merely as places of occasional retreat, are questions which I would rather ask than attempt to answer, and the answers to which are perhaps still to seek. These objects are so numerous, and are so widely scattered throughout this county, that I need hardly speak of them in detail. To one of them, however, I must refer when I come to speak of antiquities of the Roman period. Of primeval remains, intended originally as places of sepulture, most conspicuous are the cromlechs. In this class of antiquities the county is particularly rich, as regards both their number and the importance of individual examples. The great cromlech at Pentre Ievan, in Kemes, which ranks very high among those which are known to exist, the cromlech at Longhouse in Dewisland, that at Dol Willim (not in Pembrokeshire, indeed, but just beyond the limits of the county), and that at Burton, in Roose, ought to be mentioned specifically. The stone circle is commonly associated with the cromlech, as part of the same arrangement. Antiquities of this class are most abundant in the northern part of the county, in the neighbourhood of the Preselly range, of the Pencaer hills, and the St. David's rocks. Whether this fact is due to the abundance of material, or the comparative absence of cultivation (which in these, as in other cases, tends to the destruction of antiquarian remains), I do not pretend to decide. I learn from a recent number of the "*Archæologia Cambrensis*," that in the particular district in which so many examples of this class survive there also survives a venerable belief that they were intended for sacrificial purposes—in fact, that they were not tombs, but altars. In the region in which they are largely found the *maenhir* is also common. But this is so simple and so obvious a memorial that it is not in all cases necessary to attribute to it any high degree of antiquity. I do not learn that at any place in Pembrokeshire there have been found stones with those mysterious markings, which have so greatly puzzled archaeologists, which appear to be widely diffused through various parts of the world. Of sepulchral remains of another class—barrows, tumuli, *carneddan*, and so forth—I believe there is good store in the county. Two in the immediate neighbourhood, viz., Carew and Norchard Beacons, were opened immediately after the Cambrian meeting in 1851, and the results are given in the "*Archæologia Cambrensis*" of that year. Another, situated on Stackpole Warren, will, it is hoped, be examined during the present meeting. Of ancient roads I have not much to say. One seems to run along the ridge of the Preselly Mountains, and its course is marked in the Ordnance Map. I traced another in the neighbourhood of St. David's, and what I found there may be read in the history of that place.

#### *The Roman Period.*

I have little enough to say about Roman things. You know, I doubt not, the story of a learned topographer who in his great book on Iceland wrote the following pithy chapter under the heading "Of Serpents":—"There are no serpents in Iceland." Perhaps my chapter on Roman antiquities in Pembrokeshire had better have been equally concise and in other respects similar. I do not know that there is any trustworthy evidence that the Romans ever got into Pembrokeshire at all. We find material traces of them in Cardiganshire, and in the upper part of Carmarthenshire; and, although I am not aware that any Roman remains have been found there in modern times, I suppose there is no doubt that Carmarthen occupies the site of a Roman town. But I see no certain evidence of Roman occupation further west than that place. Well, then, what about Menapia, the site of which, or what remains of it, is to be visited by the Association on the 11th inst.? When I last went to look for Menapia, it was supposed to be under I don't know how many feet of blown sand, so I have no doubt it is quite safe, if it ever existed. But what is the evidence of its existence? Richard of Cirencester, or the ingenious person who wrote under that name. On the whole it would seem most likely that the name of Menapia is simply modified from that of Menevia, the Latin name (and no doubt a Latinised form of the ancient Celtic name) of the place of which I have the honour to be bishop. The Ordnance Map finds a place for another station of Richard's—"Ad Vigesium," but does not indicate any actual remains. Nor have I ever seen any trustworthy evidence to show that anything of Roman make has been at any time discovered in the county. What Fenton tells us on this head is vague and uncertain, and is mainly of the nature of hearsay evidence. I do not know whether the point which I am now about to bring forward is of the least value. At a very short dis-

tance from Menevia, or St. David's, there are two small forts, one quadrangular and the other circular, of which the latter seems plainly to be later than, and to have cut into, the former. It was long ago suggested to me by an accomplished archaeologist that the quadrangular fort may have been of Roman origin, and may have been afterwards adopted and adapted by some Celtic chieftain. What this conjecture is worth I leave to be determined by the Association. Indeed, I do not know how far the form of the object in question can be taken as evidence of its date or origin.

#### *Post-Roman Remains.*

I now come to the post-Roman period. By this I mean the interval between the withdrawal of the Roman forces from Britain and the development of the Mediæval system in Church, State, and Art. But this definition must be taken with two or three grains of salt. In the first place, it may very well be, as I have already hinted, that certain so-called primeval antiquities really belong to this period. I do not suppose that this part of Britain was ever thoroughly Romanised, and I do not doubt that in many things the people went on in their own ways all through the Roman occupation, and longer. Very likely some of the hill and cliff forts belong to this time, as, for example, one near St. David's, of which I have just spoken. Leland, in speaking of St. David's, speaks of the "two castles of Boia." One of these is no doubt the rude rampart crowning a steep isolated rock called Clegyr Foia; the circular fort cutting into the quadrangular one (which lies near it) may be the other. But Boia appears in legend as the heathen chieftain who thwarted St. David in his work. The legend may be worthless, or later tradition may have connected it (according to its wont) with a monument of much more ancient date. On the other hand, the tradition may be true, and these remains may have been the work of Boia. Again, there can be little doubt that there was much heathenism in the district after the withdrawal of the Roman power. Before this date Christianity seems to have taken a somewhat feeble hold in the country, and to have chiefly influenced the Roman towns. It was about the sixth century that a rapid and energetic development of Christian life seems to have taken place in Wales, and generally in Western Britain, mainly through the agency of a peculiar monastic system. Now, in the lives of the British saints of this period (which appear to be too unanimous in this respect to be otherwise than trustworthy) Christian teachers are always represented as having to struggle with positive heathenism. Assuming this to be true, the heathen inhabitants of the country, no doubt, went on burying, and perhaps burning, their dead in the old heathen way, so that many places of burial which we consider primeval may have been really of this date. A few years ago I was reopening the parish church of Hasgurd in this county. I was told that the churchyard, which is, if I recollect right, unnecessarily large for the parish now, must have been curtailed, as there were graves to be seen in an adjoining farmyard and field. True enough, there they were; but I do not believe that those graves were ever dug in any Christian churchyard. They were regular kists formed of rude stones. At the same time, I think it likely enough that they were post-Roman. The labour of excavation at this place would surely not be thrown away. The most important and interesting remains of this period are the monumental stones, lettered or unlettered, but manifestly Christian, which abound in this part of the principality, and of which a large collection of drawings is published in Professor Westwood's "*Lapidarium Walli*." I am indebted for much that I am going to say about these to a very valuable paper on the Ilkley crosses in the last number of the *Journal* of this Association by an able archaeologist connected with this country, Mr. J. Romilly Allen. Mr. Allen, in the paper to which I refer, divides the Christian monuments of this country into three periods, to the first of which he gives the name of Early Christian, and fixes its two limits at the landing of Augustine on the one hand, and the Norman Conquest on the other. He further divides this period into two, of which the earlier is characterised by "rough unhewn monoliths, erect, with incised crosses, sometimes accompanied by an inscription in debased Latin capitals or oghams." These he attributes "to the period when paganism was being superseded by the new faith." The monuments of the later period are marked by the peculiar interlaced ornamentation found on what are commonly, but improperly, called Runic crosses, of which we have conspicuous examples at Carew and Nevern in this county. These later monuments are assigned by Mr. Allen to the five centuries preceding the Norman Conquest. If this view is one to be relied upon, I suppose we may regard the earlier and simpler memorials (some of which, by-the-by, may possibly be older than the landing of St. Augustine) as due, like the more ancient inscriptions in the catacombs, to the age in which the Church was struggling for existence in the country, and fighting its way, sometimes through much suffering, to a recognised position; while the art and labour lavished on the more recent monuments mark a time in which the Church was settled, established, and at rest. If this is true, it is impossible to exaggerate the interest attaching to the earlier days of monuments. It is true that the names they record are in most cases otherwise unknown to us, although I believe one or two of them have found a place in the legends and genealogies of the Celtic saints.



Still they remain as tangible memorials of a time of which we have no contemporary record (if we may except the curious document which bears the name of Gildas), and about which nearly all that we can be said to know comes to us in the way of inference from later uncritical legends. Still I would observe this. Mr. Romilly Allen has shown that these rude memorials, which are very numerous in the southern division of the principality, radiated from Ireland as their specific centre. This fact both illustrates and supports what is inferred from other sources as to the reflex influence of Irish Christianity at this period, not only in Britain, but even on the Continent of Europe. It is to monuments of this date that I should especially apply the title of post-Roman. The inscriptions, at least in South Wales (though occasionally either in the ogham character and in a Celtic language, or else bi-literal and bi-lingual), are most commonly in Latin and in debased Roman letters, while the names recorded are very commonly Roman names more or less corrupted. Everything betokens a lingering shadow of Roman influence. In the later monuments, on the other hand, which we may consider transitional, we have a foretaste of Mediæval art. They may be presumed to have been contemporaneous with that earlier and simpler form of Romanesque architecture which is much more common on the Continent than among ourselves, the earlier specimens of which in England may perhaps be found in the work attributed to St. Wilfrid at Hexham and at Ripon, to the later English examples to which we give the name of Anglo-Saxon, and which (to judge from specimens of the style remaining in that country) appears to have obtained to considerable excellence in Ireland. Of architecture of this date there are no existing traces in Pembrokeshire, unless we are to ascribe to it a singular group of crosses inserted in a niche behind the high altar of St. David's Cathedral, and possibly a few stones with interlaced work which have been built up into the central tower. Nor am I aware that any other building in Wales contains even a fragment of such architecture, unless the ornamentation on the tympanum of the doorway in Llanbadarn-fawr Church, Radnorshire, should be thought to belong to it; for there we certainly find in full force and vigour what Mr. Romilly Allen describes as characteristic of the date, namely, "conventional animals with intertwined bodies, limbs, and tails."

#### *St. David's Cathedral.*

I come now to Mediæval architecture, and begin, of course, with sacred buildings. I may safely say that there is no real Norman church architecture in Pembrokeshire, or, with one exception, in the three south-western counties of Wales. The sole exception, so far as I am aware, is the fine chancel arch of St. Clears, in Carmarthenshire. Probably during the period in which this style was in vogue our churches were very poor and small, while the country was unsettled and a battle-ground of races. There is nothing of this date even at St. David's. No doubt the Celtic bishops were content to go on in their own way, and, although the earliest Norman bishops in other sees generally rebuilt their cathedrals in the fashion of the day, perhaps neither Bernard nor David Fitzgerald were quite the men to set about so great a work. But when Peter de Leia came to the see a new architectural period had already dawned, and the great bulk of our cathedral church is built in successive modifications of this transitional style. Of course, it exhibits alterations, additions, and insertions of various dates down to the beginning of the sixteenth century, and its history, as it has to be read in the traces of these numerous changes, presents an interesting, and at the same time a difficult, problem to the archaeologist. But I cannot dwell upon these points in detail at present, nor have I any right to anticipate what will, no doubt, be brought before some of you more fully on the spot. I will only say this, that while the cathedral church of St. David's takes a low rank in point of actual dimensions among the minsters of this country, I know of nothing in the world so impressive. The wild country which surrounds it, the sense of isolation, the neighbourhood of the sea and the consciousness of its being on almost every side of you, the marvellous picturesqueness of the ruined buildings in the midst of which it stands, undoubtedly enhance the influence of the impression which it produces when it is first seen from without. But the effect of the exterior, which must be admitted to depend in some degree upon these accessories, is far less imposing than the first view of the interior on entering by the south porch, above all, in the low light of evening. The complicated richness of the Romanesque mouldings, the deep and solemn colouring of the native stone, the strange and fantastic details of the flat ceiling and its pendants, and (now) the painting, gilding and mosaic dimly visible within the darkened choir, combine to render this one of the most striking architectural views in this country, or anywhere. But, again, I must not anticipate.

#### *Conventual Churches.*

The chief conventual churches in Pembrokeshire, at all events of which any remains exist, are St. Dogmael's, Monkton, Pill, and Haverfordwest Priors. Of these, two only come within the scope of the Association at present, Monkton and Haverfordwest. The former, the nave of which is in use as the parish church, and the choir of which it is intended to restore, is utterly unlike anything I ever saw in the way of proportion. It is a long aisleless choir

attached to a long aisleless nave, and having a large chapel to the north of the choir, forming, however, a distinct building. In fact, it looks like three churches in contact, and perhaps it really was so; for although it is most difficult to say exactly how the opening from the nave into the choir was managed, there are symptoms which incline me to believe that it was little more than a doorway, so that the choir and nave would have the appearance of being (what they no doubt were, as regards their use) two distinct churches. At Haverfordwest the ruins do not give any certain indication of what the church was like; but I should infer from what I have seen that it was a cruciform church of the thirteenth century, certainly without aisles, and probably with a central tower. This was a not uncommon Welsh arrangement for important churches: witness the abbey church of Talley, and the minster of Llanbadarn-fawr, in Cardiganshire. The two most important parish churches in the county, architecturally, are St. Mary's, Haverfordwest, and St. Mary's, Tenby. The former is quite one of the most interesting churches in Wales, and nowhere perhaps in the principality is there better detail. The latter is striking, but of a somewhat unusual type in Wales. Its ground plan and arrangements partly resemble some of the larger Cornish churches.

#### *Pembrokeshire Type of Church.*

None of the churches which I have mentioned, with the single exception of Monkton Priory, exhibit the characteristic features of Pembrokeshire parish churches. This singular type is found, as a rule, only within the English-speaking districts of the county, and I believe no specimens of it are found within those districts on the shores of St. Bride's Bay. Their main features are tall and slender towers, generally diminishing as they rise, a general rudeness of masonry, and internally much vaulting, with side chapels and squints, and many holes and corners, and a general effect of cavern-like obscurity. Of these churches I do not know that a more typical example can be found than Manorbier in this neighbourhood. They are very peculiar, but more in their general tone and effect than in any particular details. I know nothing like them anywhere else. Unhappily—I am speaking now as an archaeologist, not as a bishop—the hand of the restorer has been somewhat busy with them, and it is not always easy to make out how much one is to believe of what one sees. I ought, in passing, to call attention to one very beautiful parish church in this neighbourhood, which is not at all of the Pembrokeshire type. I mean Carew, where it is pretty easy to recognise the hand of my predecessor, Bishop Henry Gower.

#### *Castles.*

Then we come to another class of antiquities, both numerous and conspicuous in this district. Pembrokeshire is a perfect paradise of castles. Not to mention others, three remarkably interesting ones are within easy reach of this place—Manorbier, which is, perhaps, the most picturesque of the Pembrokeshire castles, especially when looked at in connection with its surroundings. Carew, which is the most complete, and which, like Kenilworth, contains portions which mark the castellated manor-house rather than the castle, properly so called, and Pembroke, the queen of South Welsh castles, and certainly one of the most impressive masses of building I have ever seen. One more castle must be specially mentioned, both on account of its inherent interest and because some of those who hear me are to pay a visit to it next week. I mean Picton, which presents the unusual feature of a mediæval fortress (for it was a real fortress, and not a mere castellated manor-house) remaining in the occupation of the ancient family which owned it down to the present time. Considering that it is at this time a convenient mansion, to which a large addition was made early in the present century, there has been far less destruction of its original features than could have been expected to be the case.

#### *The Bishop's Palace.*

Of domestic remains of the Middle Ages there are, in addition to minor buildings and fragments to which I need not now refer, but which are numerous, two great habitations of my predecessors, one undoubtedly, and the other (in part at least) very probably, the work of Bishop Henry Gower. The palace at St. David's is quite one of the best pieces of Mediæval domestic architecture in the kingdom. Its style and arrangements are peculiar to itself and to two other buildings commonly attributed to the same prelate, while it presents to the archaeologist the unusual spectacle of a great Mediæval house, partially ruined indeed, but otherwise left very much as it was built. It dates from the early part of the fourteenth century, and exhibits few, if any, traces of later addition or change. I suspect the secret of this to have been that my predecessors never found St. David's a convenient, or perhaps a very comfortable, place to live at, so that they did not care to adapt it to the requirements of their own times. I think it likely that it was largely used during the first two centuries of its existence for receiving the numerous pilgrims who came to St. David's. Soon after the Reformation it fell into decay. Undoubtedly the bishops' favourite place of residence, when they were in the diocese at all, was Lamphey, to which I have already alluded, though not by name. Whether this is to be regarded as an earlier attempt in



the style which culminated in the St. David's Palace, or as a feeble imitation of it, has been disputed, but I will not now stop to consider. All I can say is that it is very like and greatly inferior to it. This mention of episcopal houses leads me to notice the bishops' baronial castle of Llawhaden, which I hope some of you will see next week. If you have reason to find fault with its present condition, please to remember that it does not belong to me, but to the Ecclesiastical Commissioners for England.

#### *The Welsh Marches.*

I must at this point bring to a close my remarks upon the material and tangible antiquities of the county. But there are one or two other points which deserve notice. First, there was perhaps no other part of the kingdom in which the feudal system was more thoroughly developed in the Middle Ages than was the case in Pembrokeshire. The great distance of the district from the central authority, and the neighbourhood of a hostile and restless race, gave the local lords of the soil a position far more nearly resembling that which their compeers occupied in France and Germany than was generally to be found elsewhere in England, except (from similar causes) in the north. The Earldom of Pembroke was, in fact, a palatinate. The Lordship of Kemes remains to this day, perhaps the best specimen of a Lordship Marcher, although it is, of course, shorn of much of the power with which its lords were anciently invested; while within his Barony of Llawhaden and his Lordship of Dewisland the Bishop of St. David's occupied a position analogous to that of his brethren at Durham and at Ely. A carefully-written history of mediæval Pembrokeshire would be a work full of intense historical and even romantic interest; and the interest would be largely enhanced by the fact that two races different in origin, language, feeling, and traditions were found here, as they are still found, side by side. One cannot help regretting that no work of fiction by a master hand like that of Scott has ever had its scene laid in this county. That great writer of romance did, indeed, attempt to describe the social condition of the Welsh marches, but the sketch was a slight one and the results were not very satisfactory; while he placed on the eastern border of the Principality the curious settlement which is recorded to have been planted in the district in which we are now gathered. I speak, of course, of the Flemings; and, to judge from my experience on a former occasion, I do not doubt that we shall hear enough of the Flemings before we separate. Perhaps I may be allowed to say a little about them now.

#### *The Anglian Settlement.*

A very slight notice of this settlement has been developed by the antiquarian imagination in a much greater matter than we can find it very easy to accept as historical. The establishment of a certain number of strangers of Teutonic blood and speech has been commonly regarded as a sufficient explanation of the curious phenomenon which here presents itself to the ethnologist, namely, the prevalence of the English language throughout the south-western portion of this county, not at present only, but, as is plain from the names of places, for centuries past. Curiously enough, another, but a smaller, district which occupies a similar position, and which, like the Anglia Trans-Walliana of Pembrokeshire, is cut off from England by the Welsh race, is similarly supposed to have been colonised by Flemings, without any evidence, so far as I know, that any of that race ever established themselves there. I speak of the peninsula of Gower, in which a supposed Flemish colony is, I believe, merely an inference from the alleged existence of such a colony in Pembrokeshire. I am inclined to think that the Flemish settlement in Pembrokeshire was by no means large enough to cover the facts before us, while I have no reason to believe that any such settlement was made in Gowerland at all. In each case the country was thoroughly conquered and settled by invaders from England, being doubtless attacked from the side of the sea; and the old inhabitants, who, to judge from the names of places in both districts, seem long to have maintained a separate existence in the midst of their conquerors, were at length absorbed and assimilated. The Pembrokeshire Anglia Trans-Walliana was a district nearly resembling the Irish Pale, and, like that, was known as the "Englishry." It may be a question, however, whether the way had not been paved for this conquest, settlement, and ultimate assimilation of the original inhabitants by Scandinavian settlements on the coast and on the shores of Milford Haven. We read much in the chronicles of St. David of incursions of Danes and Northmen, and though there is no direct historical evidence of anything beyond passing invasions, the names of some places in Pembrokeshire seem to point to something like a settled occupation at certain points. Skokholm and Skomar, Haverford and Milford, Fishguard and Hasguard, all look more or less that way. Although it is said to be the corruption of a Welsh name, I have great doubts whether Tenby is not really Scandinavian; while that of Freystrop, if not of northern origin, which it very well may be, must surely date from a time when the Teutonic people who built or occupied the village worshipped the gods of their heathen forefathers, which certainly cannot be supposed of the Flemish settlers of the twelfth century. I throw out these suggestions for the consideration of the Association at its present meeting.

And now I must draw what I have had to say to a close. I

am conscious of having left many *lacunæ*, and of having, in all probability, made several mistakes. But you must take these remarks as a slight and hasty sketch of the antiquities of the district, and nothing more. It only remains for me to tender to the members of the Association my most grateful thanks for the conspicuous honour which has been done to me in their choice of a president for this year, and at the same time to wish them a pleasant, prosperous, and profitable meeting.

## HINDRANCES TO THE PROGRESS OF ART SCHOOLS.\*

WITH many admirable exceptions, the influence of those who derive direct and immediate advantage from improvements in design and art workmanship have not been favourable to progress, especially when the schools were in their infancy, needing all the support that could be given to them. The establishment in this country of the art of design as a distinct pursuit has necessarily brought about a change in the attitude of manufacturers, but they are often indifferent to art except as a saleable commodity, even where abundant means and the prestige of past reputation for honest workmanship would justify higher and bolder aims; and the too common desire to repress all individuality in designers and art-workmen is greatly to be regretted. Many excellent drawings are completely spoilt by alteration or combination, simply in order that designers may not be able to lay claim to them, and occasionally the process is so effective that only *disjecta membra* can be identified. Many illustrations might be given of the want of interest displayed by manufacturers, but one instance must suffice. Not long ago, an artisan student at a school of art designed a fabric, and asked his employers to weave a portion for a competition. The request was refused, whereupon he took his design to another firm, paid for its production, gained the sought-for prize as well as a prize from South Kensington, and is now employed as a designer to the manufacturers who wove the piece. Had he been less determined he might still have been serving his former employers as a weaver; had they been more liberal-minded they might still have enjoyed the advantage and profit accruing from the exercise of skill in the development of which they refused to assist. As an example of the ignorance to be encountered, it may be stated that not long ago an ironfounder, speaking at a public meeting on the superiority of the nineteenth century over any previous age, said that his men could put up a pair of gates in as many days as it took years to complete the Ghiberti gates! Nothing less than Sydney Smith's "surgical operation" would suffice to get any idea of art into the head of a man of this stamp; and though the case is doubtless an exceptional one, the feeling of many manufacturers towards art in its relation to their productions is certainly very capable of elevation.

Although the advance already made receives cordial recognition abroad, and we are gradually becoming alive to the truth that foreign work in design or execution is not necessarily in admirable taste, hankering after continental "novelties" is by no means extinct amongst us, and receives no little encouragement from the manufacturers themselves. Sir Philip Owen, in an address recently delivered, said that some few years ago he presented the prizes at a school of art, and one of the recipients was a designer, who entered the service of a Parisian firm at a salary of 400*l.* a year. While he was at home this young man made a great many designs, without finding any one who would take them up; but as soon as he went to Paris the manufacturers followed him there, and paid him ten times the amount they would have had to give for his designs in England. From the first establishment of the schools to the present time—though in a gradually decreasing proportion—manufacturers have spent much money on foreign designs, many of them done by English hands, which might have been more economically laid out at home, both in a personal and in a national sense; and several instances could be mentioned in which artists of very high merit, unable to find employment in the home market, have attained abroad a position there recognised as eminent.

Ungenerous disparagement of the schools of art and of their teaching has also had its hindering effects. In spite of abounding evidence to the contrary, men are sometimes heard to declare that the schools have failed in their object, and that manufacturers in want of designers apply in vain for qualified and capable students. Cases are, however, known in which fabricators of such statements have persistently rejected designers of ability who have applied to them for employment until they have at last been brought to admit that they had no such requirements. And where designs have been submitted for acceptance it has occasionally been ascertained, by means of precautions previously taken, that those who rejected them as valueless have, nevertheless, been mean enough to take tracings of them before sending them

\* From the "Handbook on Art Schools." By Mr. J. C. L. Sparkes.



back. Therefore, when disparaging statements are made respecting the schools and their teaching, the public will do well to contrast them with the incontrovertible evidence afforded by their marked effects on local industries and art manufactures generally, as they are practically exemplified in the admirable display to be seen in the gallery devoted to the work of the schools in the International Health Exhibition.

It may be hoped, however, that detractors and opponents are in a constantly decreasing minority. In many towns the beneficial operation of schools of art is warmly acknowledged and encouraged, both by manufacturers and by the general public. Many firms insist on the attendance of their apprentices at the evening classes and make this a condition of their indentures, sometimes paying the school-fees, and contributing also to the local subscription in aid of its support. Such subscriptions are, however, by no means so general or so liberal as they ought to be. It has been shown that in some places the inhabitants have been most generous in providing for the erection of schools of art, museums, &c., and in many others, especially the smaller towns, the local subscriptions are fairly liberal, sometimes approaching the amount of the aid received from Government; but there are large towns in which not a single penny is subscribed even for local prizes, which are occasionally provided by the art master out of his own stipend, and in others the amount subscribed is ridiculously small considering the wealth of the locality and the dependence of its staple industry on the education of the designer and art workman. Local prizes are greatly needed as an inducement to exertion, especially in schools that have little or no chance of success in the national competition. The influence of this annual trial of strength is variously regarded, the successful schools being warm in praise of its invigorating influence, whilst those who win no share in the honours bestowed have a tendency to underrate their worth. But there can be no doubt of the advantages of a general competition of this kind, and any attempt to extend the number of prizes, or to make them more easy of attainment, would necessarily have the effect of lowering their value as marks of distinction. It might, however, be advisable to extend the scope of departmental reward, so as to bring within its range the work of schools which are practically outside the pale of the national competition. But it should be the business of each particular locality to recognise and reward the merit of students, in all stages of their training. The value of competition, as a stimulus to application, cannot well be over-estimated, and local prizes keep alive the interest of students, especially of the younger ones, who have to wait a long time for success in the higher grades of their art. Liberal encouragement is therefore of much importance, and the public would do well to bear in mind the words of the wisest of men:—"There is that scattereth, and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty."

In addition to those already mentioned, there are various minor hindrances that may be briefly glanced at, such as the vicious and vulgar admiration for what looks "rich" and costly, rather than for what is artistic; the extravagant expectations and consequent disappointment of people who look for the prompt conversion of their children into draughtsmen and painters; the absence of any definite object in towns where design is not required for the local industries; and the lack of sympathy experienced in some places by teachers, who long in vain for countenance and encouragement in their work. There are also internal hindrances, amongst which may be admitted mistakes in central government and local control, to be obviated only by the corrective influences of time and experience, which are not rapid in their action on departmental arrangements; the tendency of students to adopt fine art as a profession, either as a ready means of earning a livelihood, or under the mistaken supposition that it is better to be an indifferent "artist" than a good designer or art-workman; incompetence and want of tact on the part of teachers—for in art, as in scholarship, though men of high attainments are comparatively abundant, really good teachers are rare; the insufficiency or unsuitability of school buildings, which in some places are greatly in need of improvement; the too general avoidance of time studies in the provincial schools, notwithstanding their paramount value in the rapid development of ability, as distinguished from elaborate manipulation; and the inability of working students to attend the classes, except at the end of a hard day's labour, when they are naturally inclined to devote their scanty leisure to recreation, rather than to study. Many have to walk long distances to and fro, and though the disciplinary advantages of self-denial are undoubted, their studies might be greatly facilitated by some relaxation of the hours of labour, and it is hoped that the inclination to concede this will become increasingly general. The conventional difference which exists in this country between the social position of the pictorial artist and that of the designer will doubtless be diminished as the art of the latter becomes better appreciated. In France there is a much nearer approximation of the one to the other, and those who confine their ideas of art to that which is known as fine art should be reminded that Raphael and Albert Dürer, Holbein, and Cellini, and Flaxman, are inseparably associated with the art whose dignity and importance they are so apt to underrate. Certainly no designer who aspires to be regarded as a

true artist should be ashamed of his vocation, with such imperishable names as these to point the way to excellence.

There are, however, designers and designers, and their earnings have necessarily a very wide range, according to the nature of the industry to which their art is applied. There is in our manufactures scope for the exercise of all degrees of artistic skill, which may be applied to the simple sprig that adorns a cotton print—such as the famous parsley leaf so closely associated with the fortunes of the Peel family—or to some beautiful and elaborate work of art which will claim the admiration of all time. In the lace trade there are designers who receive salaries ranging from 500*l.* to 700*l.*, and even 1,000*l.* a year, whilst others, working independently for any firm that chooses to employ them, also make large incomes by their skill. Good textile designers, even without marked genius, command from 100*l.* to 300*l.* a year, whilst the salaries of others of inferior mark range as low as 70*l.* The earnings of designers of wall papers vary from 3*l.* to as much as 20*l.* a week, but this maximum is of course but rarely touched. In calico printing and many other trades the salaries paid are by no means high, generally about 2*l.* a week, but it is difficult to quote figures, which must be altogether dependent on the nature of the work and the ability of the designer, and, in a measure, on his quickness also. Unfortunately even capable designers frequently find encouragement in their art so slow and precarious that they are compelled to have recourse to teaching, picture-making, or some other means of providing for their necessities; and cessation of employment in some departments of art-manufacture not unfrequently results from their own success, for (in textiles especially) the necessity for fresh designs is in an inverse ratio to their acceptability; manufacturers are of course only too glad to keep their looms engaged in the execution of a particular pattern, until the demand for its production ceases. The deficient cultivation of the purchasing public is still much felt, not only by manufacturers, who frequently meet with a slow demand for their most artistic productions, and are thus discouraged in their attempts to lead the public taste, but also by the more capable designers, who find themselves in advance of the market, unable to obtain the employment for which they are best fitted.

At a time when most strenuous efforts are being made in foreign countries to bring art-teaching to the highest pitch of excellence, it is more than ever desirable that no opportunity should be neglected, or rather, that opportunities should be sought, for the improvement of our systems of instruction and management. Many masters of schools of art occupy a position of isolation, the narrowness of which has its effects on their work; and, as a counteracting influence, it would be very advantageous if arrangements could be made so that they might have an opportunity to spend a week in London during the summer holidays, in order to take part in an annual conference with the officials of the department on subjects relating to the work of the schools, and at the same time gather reciprocal advantages from renewed intercourse with old fellow-students. Might it not be possible, also, to assist a certain number of deserving masters to enlarge their experiences by occasional visits to the schools of France, Belgium, &c.?

## EXHIBITION AT BRISTOL.

AN industrial and fine art exhibition for the counties of Gloucester and Somerset was opened on Tuesday at the exhibition buildings, Rifle Drill Hall, Queen's Road, Bristol, in aid of the funds of Bristol University College, founded in 1876. The college has no endowment, and is dependent to a great extent for its existence on local beneficence. It proposes not only to supply for persons of either sex above the ordinary school age the means of continuing their studies in science, language, history, and literature, but particularly to afford appropriate instruction in those branches of applied science which are more nearly connected with the arts and manufactures. After using temporary buildings for some four or five years, the promoters commenced their permanent structure in Tyndall Park, Clifton, upon the two completed sections of which about 15,000*l.* have been spent, but the estimated cost of the whole structure is 50,000*l.* The annual subscriptions to the sustentation fund at present amount to 1,100*l.*; the total receipts from students last session were 2,200*l.* The annual expenditure is 4,500*l.*, and there is consequently a deficit. The average number of students who have attended the college during the last six years exceeds 510, and the average number of classes attended has been 820. The Industrial and Art Exhibition, which is divided into three sections, occupies in all 35,000 superficial feet of space, exclusive of several courts. Section 1.—Fine Arts. Division A includes paintings, drawings, statuary, bronzes, mosaics, and art designs in the precious metals and gems; division B, architectural designs and sketches, engravings, etchings, photographs, tapestries, art needlework, rare carvings in wood and ivory, paintings on glass, ivory, and porcelain, and designs for art manufactures. Section 2 comprises machinery in motion, and illustrations of mode of manufacture. Section 3 embraces specimens of industries and natural productions, models, and mechanical designs. There are



about 120 exhibitors, mostly local firms, in the industrial exhibits and machinery in motion.

In the large Drill Hall the cabinet manufacturers of Bristol and Bath cover by far the largest space, and artistic cabinet work, both in costly and inexpensive material, is displayed in suites of rooms temporarily constructed, and presenting all the appearance of completely furnished apartments. Examples of the old stoneware produced in Bristol are shown. There are about one hundred and fifty specimens of the Elton ware from Sir Edmund Elton's Sunflower Pottery established within the past two or three years at Clevedon. Every article being hand-made, the variety of design is particularly marked.

The fine arts department, a distinctive feature of the exhibition, contains a magnificent collection of valuable pictures numbering about five hundred contributions by owners from their private collections, the Mayor of Bristol being a large contributor. These include *The Pool of Bethesda*, by Mr. E. Long, R.A., a couple of paintings by Mr. John Brett, A.R.A., a large number of works of Syer, Branwhite, and Müller, and the following artists of distinction are also strongly represented:—S. B. Jackson, C. Knight, Hopkins, D. Cox, Leitch, F. Danby, A.R.A., J. Curnock, J. B. Pyne, Faulkner Poole, R.A., Britton Willis, Orchardson, R.A., M'Whirter, B. W. Leader, Yeames, R.A., Sidney Cooper, R.A., J. Hardy, Briton Riviere, R.A., W. P. Frith, R.A., J. A. Stanfield, R.A., Sir A. W. Callcott, R.A., Frank Holl, R.A., and J. E. Millais, R.A. The following articles are exhibited on loan from the South Kensington Museum:—Electrotypes, European porcelain, enamels, jewellery, glass, and goldsmiths' work, Spanish and Italian embroidery, Japanese and Chinese pottery, bronzes, and enamels. The Bristol Corporation plate is also a prominent object of interest.

### ELECTRIC LIGHTING OF HOUSES.

A PAPER on "Electric Lighting of Houses" was read by Mr. W. H. Preece at the meeting of the British Association at Montreal. The author described the fitting up of his own house, which has been done not so much to determine the cost as to discover faults, troubles, nuisances, and the amount of supervision necessary to keep it going. His house is really gas-lighted, but the gas is burnt in the garden where he extracts that which he wanted—light, and discharges harmlessly into the air what he does not want—poison. The gas-engine, dynamo, and fittings were described. He uses secondary batteries, of which he expressed a very favourable opinion. He has constant night and day service, and can illuminate the house at any moment in an instant. Even his daughter's doll-house has its four rooms lighted by little fairy lamps. The use of 30-volt pressure renders safety from shock or fire certain. He carries the light throughout his garden, and can visit his greenhouses any hour of the night. He can even light a cigarette by electricity. Mr. Preece regards electric lighting still as a luxury, and estimates the cost of fitting a house like his at 7*l.* 10*s.* per lamp. He does not expect to consume more gas than hitherto, while he has filtered light and purified air. The advantages are the steadiness and comfort of the light, the durability of the decorations, the absence of heat and destructive gases, pure air, and longer life to all using electric light. Its economy consists in being used only when and where wanted. If it costs twice or thrice what gas does it need only be used half or one-third the time; gas is needlessly wasteful. He spoke hopefully of the future of electric lighting, and believed every one would have it if electricity were supplied at our doors. This in England was rendered almost impossible by the objectionable Act of 1882, which should be repealed or considerably modified.

### THE ROYAL ARMOURY OF MADRID.

A FEW weeks since, says a correspondent of the *Times*, the news arrived of a fire having occurred on the roof of the Royal Museum of Arms and Armour at Madrid—news which startled every historian, archæologist, and lover of the fine arts to whom by hearsay or by sight that invaluable collection was known. Strangely enough, beyond the mere notice of the accident, scarcely any further information has been published in England on the subject, which, as far as the general reading public is concerned, has almost faded out of memory. Not so with those who know the priceless gems of that most rich museum, taking rank as it does with the armouries of Vienna, Dresden, Turin, and Paris.

In a long room on the first floor of an isolated portion of the ancient palace, and facing the courtyard of the new, these treasures had been gathered together, and were admirably mounted and arranged under the constant and untiring care of a true art lover, the Conde de Valencia de Don Juan. Here were grouped the numerous and remarkably fine suits of armour for the tournament, for war, or for mere pomp, which actually belonged to and had been used by the Emperor Charles V., after whose death the other moiety of the Imperial armoury passed to the Hapsburgs, and is

now preserved at the Vienna Arsenal. Some 20 suits remain at Madrid, among which are some of the finest examples of the Flemish, the Italian, the German, and the Spanish armourer's art, variously enriched by inlay of silver and gold, by graving, and by incomparable *repoussée*. One of the helmets (which has been estimated by good authority as likely to realise at least 75,000 frs. at the Rue Drouot or Christie's) and some shields are quite unrivalled for their admirable design and the perfection of their workmanship. Then in sequence were arranged the splendid suits and weapons which belonged to Philip II., to Don Carlos, to Philip III., and Philip IV., trophies of Lepanto, numberless historic swords, such as that of Francis I., of "el Gran Capitan," Fernandez Cortez, Pizarro, &c., many of which are of surprising beauty. For years, after the Spanish fashion, these arms lay here and there neglected in various palaces, &c., exposed to the chances of rust, rough usage, or robbery, until of late, under the intelligent initiative and at the private expense (some 250,000 frs.) of King Alfonso XII. and the painstaking assiduity of a true connoisseur, the collection was barely finished in arrangement when this disastrous fire has thrown all into a second chaos. The effect of that long room, filled with mounted warriors and wearers on foot of these rich suits, was very striking; but that general effect was soon forgotten in the examination of the lovely details of ornamentation which covered the surface of so many of the choicer arms. The "dummy" men and horses on which they were mounted, some portraying the features of those monarchs whose steel shells they bore, were richly caparisoned and decked in costly stuffs of the period of the armour, and copying, as far as could be, the costumes represented in painted portraits of their time; all had been directed by high intelligence. Such was this rich treasure-house when visited a short time since by the writer of this article. By great good fortune the manuscript illustrated catalogue made by order of Charles V. existed, and was the foundation for recognition and classification of various important pieces. Contemporary portraits at the Prado and elsewhere also helped in the identification.

On July 10, some short time before midnight, the northern angle of the roof was seen to be on fire. There, in the very centre of the capital, within full view of the Palace Guard (for the building formed one side of the quadrangle), one would have supposed that in a few minutes every sign of fire would have been extinguished, the more so as the building was known to contain so many objects of incomparable value. Yet a precious hour was lost, during which not one bucket of water was thrown, not one fire-engine brought into service. The Spaniards are personally courageous, and those who went to the rescue risked their lives in the endeavour to save the arms. One narrow staircase only existed, and by this and by the windows the arms and armour from the long gallery were hurled pell-mell to the crowd below. But soon the smoke and fire became too strong, and suffocation threatened those engaged in the building; the roof frame was burnt through and threatened to fall among the workers, and soon what remained of this most noble armoury was buried among the burning and smoking fragments of the fallen roof. The loving, careful work of years and priceless treasure was irrecoverably lost for want of a few gallons of water and a handy pump. Thanks, however, to those brave men, the more precious objects of the collection have been saved—many much damaged, it is true, but not much hopelessly. Some of the choicest armour and historical suits and swords, the gold Visigothic crowns, some of the banners from Lepanto, and that most precious illustrated manuscript catalogue of Charles V. referred to above are among the salvage. But the extent of losses cannot yet be known. Nearly all the banners, all the rich and precious ancient stuffs used for clothing the mannequins, all the saddle-cloths, housings, and lambrequines, and the *chaises à porteurs* used by Charles V. were burned.

There are some few learned and scientific men at Madrid, and some who love art and antiquity, to whom the rich Gallery of the Prado, the unfortunate Armeria, and other museums of the city are sources of pride and intellectual enjoyment; but, unfortunately, such men are lost in the crowd of politicians, for politics in Spain are the mania of the day. Nevertheless, the emotion at the news of the catastrophe was great, and the Minister of the Interior was questioned upon the matter and upon the existing (or rather non-existing) arrangements for the security of such collections of art and public buildings as the Gallery of the Prado, the Academy of St. Ferdinand, the Archæological Museum, the Royal Library, the Palace, &c.; and the inadequacy and bad organisation of the fire-brigade was referred to. One would have expected that the Deputies and Senators of Spain would have immediately insisted on a proper inquiry being made, with the view of efficiently reorganising the corps of Pompiers and perfecting their engines and apparatus. Not so. The Minister of the Interior calmly rises in the Senate on July 11 to declare "that the service for the fire-engines of Madrid, say what they may, was far superior to that of most of the capitals of Europe," upon which the subject drops, and all-absorbing political discussion continues its usual endless course.

Here are some few of the consequences of Spanish negligence. To say nothing of the sale of national works of art and archives by Communes, and from churches, convents, &c., and of grand



heirlooms and the like, let us see what has been lost by fire. In 1604 the Palace of the Prado was burnt, and with it some forty *chefs d'œuvres* by Titian, Antonio Moro, Coello, and others; the inventory of these lost historical portraits, &c., still exists. In 1734 the tower of the ancient Alcazar, the Palace of Charles V. and of Philip II., on the site of which now stands the present royal palace. A few years since the Escorial took fire in the roof of the Library, and some hundreds of manuscripts, &c., were destroyed or injured. The Alcazar of Toledo and that of Segovia were burned, and nothing saved. At the Royal Palace, in Madrid, where six hundred magnificent tapestries are stored and other precious objects; at the Picture Gallery of the Prado; at that of St. Ferdinand; at the National Library; at the Archæological Museum—there are neither a station of the fire brigade, nor water conduits, nor tanks, nor even buckets. Lightning conductors are rare and ill-constructed, but the cigarette is in every mouth. During winter braziers inadequately warm the rooms, and petroleum lamps are in use, for in many of such buildings the numerous keepers and their families are heedlessly lodged. No telegraphic system is at hand to raise alarm, nor do the keepers make their nightly round.

## THE GEOLOGICAL SURVEY OF THE UNITED KINGDOM.

A PAPER on the "National Geological Surveys of Europe" was read at the meeting of the British Association at Montreal. It stated that in England the foundations of the survey, and, in fact, of all detailed field geology, were laid by private workers, and a very large proportion of English geological literature has always come from them. On the Continent this has rarely been so; nearly all the surveys are directly due to the Governments, and much of the geological literature comes from those connected with the surveys, or from official mining engineers. There, also, many professors of geology are connected with the surveys; this is not now the case in England, although many of its professors have at one time served on the staff. In fact, at the present time the Geological Survey and Cambridge University almost divide between them the active teaching power of geology in England. The publications of the English Survey are confined to questions relating to its work and progress; but this is not always the case abroad. The staffs of the Austrian and Prussian Surveys have always been active in working at the geology of districts outside their own special areas, which are by no means small, and the results are given in the official publications of those surveys. The best work of late years relating to the geology of Turkey and Greece has been done by officers of the Austrian Survey. The most interesting part of Mr. Topley's report is that which relates to the geological survey of the United Kingdom. The founder of this survey was H. T. de la Beche, who before 1832 had coloured geologically the Ordnance one-inch maps of the South-West of England. In that year a small grant was made by the Government towards the cost of publishing these maps by the Ordnance Survey, but De la Beche also contributed money for the purpose. Subsequently De la Beche was definitely appointed to make a geological survey, under the direction of General Colby, then the head of the Ordnance Survey. The first result of this was the publication of the "Report on the Geology of Devon, Cornwall, and West Somerset," 1839, with the one-inch maps of the district. About 1832 other geologists were surveying various districts upon the one-inch maps of the Ordnance Survey—William Smith in many parts, W. Lonsdale near Bath, H. Maclauchlan and J. R. Wright, both of the Ordnance Survey, the Forest of Dean and near Ludlow respectively, W. Logan in South Wales. Some of this information, notably Logan's, was incorporated in the official geological maps. In 1845 the Geological Survey was detached from the Ordnance Survey and was placed under the Woods and Works; in 1854 it became a branch of the Department of Science and Art. From about the year 1832 some officers of the Ordnance Survey in the north of Ireland collected geological information, which was completed and published by Captain J. E. Portlock in 1843. The geological survey of Ireland was commenced in 1845, with Captain H. James as director, the subsequent directors being T. Oldham in 1845; J. B. Jukes, 1850; E. Hull, 1869. The survey of Scotland was commenced in 1854, and was made a distinct branch of the geological survey in 1867, with Arch. Geikie as director, succeeded in 1882 by H. H. Howell. England, the original home of the survey, was presided over by De la Beche as director till 1845, when A. C. Ramsay became director. He was succeeded in 1872 by H. W. Bristow, now the senior director. The dates of appointment of the directors-general are—H. de la Beche, 1845; Sir R. I. Murchison, 1855; A. C. Ramsay, 1872; Arch. Geikie, 1881. Until 1845 the survey was known as that of Great Britain; when the survey of Ireland was commenced the original name was confined to that of Great Britain proper, the entire survey being called that of the United Kingdom. In 1877 the title of Great Britain was discontinued entirely, this survey being divided into those of England and Wales and Scotland. The total number of the staff of the Geological Survey is now fifty-

seven, distributed as follows:—One director-general, three directors, three district surveyors, fourteen geologists, twenty-five assistant geologists, four naturalists and palæontologists, four fossil collectors, three general assistants. The survey of the greater part of England has been done on the one-inch ordnance maps (1 : 63,860). In the north of England the six-inch maps (1 : 10,560) have been used, and much of the ground has been published on this scale. In the south of Scotland the six-inch maps have been used; but in the north of Scotland the survey will be mainly on the one-inch scale. In Ireland the six-inch maps have always been employed for field work. In Ireland the drift has always been shown upon the one-inch maps by "stippling." Originally no glacial drift was shown upon the English maps; but in 1871 the publication of drift maps was commenced, and two editions of many of the maps are now issued—solid and drift. In the east of England only the drift maps are issued, very little being here known of the solid geology. At the end of 1883 the field survey of the original one-inch map of England and Wales was completed; the survey of the drifts over the areas over which these are not yet mapped has been commenced. In Ireland and Scotland there is only one system of numbering the maps. In England some maps are in sheets, some are divided into quarter-sheets. In the new maps of the Ordnance Survey the system of dividing into quarter-sheets will be discontinued. The maps and their divisions in the north of England are the same in the old and the new series, the numbering only being different; but in the south of England there is no relation between the boundaries of the old and the new maps. In addition to the maps there are "Horizontal Sections," on the scale (for heights and distances) of six inches to a mile. These are published at 5s. each; many have "Explanations," price 2d. each. The details of coal measures, cliff sections, &c., are given on sheets of "Vertical Sections," 3s. 6d. each. An "Index Map," scale four miles to the inch (1 : 253,440), has been published of Wales and the adjacent districts, in six sheets, price 3s. 6d. each. An index map of the whole of England and Wales upon the same scale is now in progress. In all maps of the United Kingdom the meridian is Greenwich. The publication of the maps of England dates from about 1839, those of Ireland from 1855, of Scotland from 1859. The number of maps and sections published is shown in the following table:—

	England and Wales.	Ireland.	Scotland.	Total.
1-inch map (1 : 63,860) (sheets or quarter sheets in England and Wales)	244	180	33	457
Solid . . . . . 183				
Drift edition of solid map 49				
Drift only . . . 12				
6-inch maps (1 : 10,560) . . . . .	216	10	128	354
Horizontal sections . . . . .	129	30	9	168
Vertical sections . . . . .	69	1	7	77
Total . . . . .	658	221	177	1,056

The prices of the one-inch maps are from 1s. 6d. to 8s. 6d. for England (a few detailed drift maps at higher prices); 1s. 6d. to 3s. for Ireland; 4s. to 6s. for Scotland; of the six-inch maps, 4s. to 6s. The "Memoirs" of the Geological Survey date from 1845. Four volumes were consecutively numbered; vol. 1 and vol. 2 (in two parts) contain several papers. The other two volumes and all later "Memoirs" are each confined to one subject or district. There are twenty-four volumes in all. Memoirs or explanations of sheets of the map have been issued since 1859. Those published are—for England, 49; Ireland, 92; Scotland, 17. British fossils are described in "Decades" (thirteen published, from 1849) and "Monographs" (four published, from 1859). "Mineral Statistics" have been published annually from 1853 to 1882, but in 1883 the Mining Record Office, in which these were prepared, was removed to the Home Office, and the statistics will in future be issued as parts of the reports of the Inspectors of Mines. No official general map has been issued by the survey, but the following maps, on scales varying from 7 to 11½ miles to the inch, have been published by the directors of the respective surveys. They are reductions of survey work to date:—British Islands, by A. C. Ramsay, 1878; England and Wales, by A. C. Ramsay, 4th edition, 1879; Ireland, by J. B. Jukes, 1867; Ireland, by E. Hull, 1878; Scotland, by A. Geikie, 1876.

**Frickleton, near Preston.**—Memorial-stones of a new Wesleyan chapel were laid on Saturday last, and a new Sunday-school in connection with this chapel was opened on Sunday. The chapel will accommodate 275 worshippers, and the style adopted is the English Renaissance, the materials being patent bricks and Longridge stone. The entire cost will be about 1,500l. The architect is Mr. David Grant, M.S.A., of Preston.



## NOTES AND COMMENTS.

THE annual report on the London water supply, which Messrs. CROOKES, ODLING & MEYMOTT TIDY have prepared, appears to prove that the water was less impure in 1883 than in previous years. The proportion of samples found to be bright, clear, and well-filtered amounted to 91.4 per cent. in 1881, to 97.6 per cent. in 1882, and to 98.3 per cent. during last year. The proportion of samples free from recognisable ammonia amounted in 1881 to 60.6 per cent., in 1882 to 70.9 per cent., and in 1883 to 82.7 per cent. of the whole. It has also been ascertained that there is a gradual yearly diminution in the quantity of organic matter present in the water that is derived from the Thames. The improvement is attributed in a great measure to the efforts made by the water companies to improve their filtration and subsidence processes and arrangements.

Two of the best of the Blenheim pictures have been saved from enriching the Berlin Gallery. On Monday last Mr. Justice CHITTY made an order sanctioning sales of the *Madonna Ansidei*, by RAPHAEL, for 70,000*l.*, and the equestrian picture of *King Charles I.*, by VANDYCK, for 17,500*l.*, to the Trustees of the National Gallery. Two pictures by RUBENS, one of himself and his second wife, the other of his second wife and her page, which would have been desirable acquisitions to the National Gallery, were sold for 52,500*l.*, but the name of the purchaser was not disclosed. Another picture at Blenheim, the *Mater Dolorosa*, by CARLO DOLCI, is also worth purchasing, and might be obtained at a more moderate cost than those which have been attained.

A LARGE contract will shortly be commenced at Preston, as on Wednesday the tender of Mr. THOMAS A. WALKER, of Great George Street, Westminster, for the construction and completion of the diversion of the Ribble and river entrance for dock, with entrance-gates, timber staging, tidal basin  $4\frac{3}{4}$  acres in extent, locks, lock-gates, dock 40 acres in area, and other works was accepted. The first contract amounts to 439,359*l.*, and the works comprised in it are to be completed before January 1, 1889. A second contract was entered into with Mr. WALKER for deepening the diversion of the river, the amount being 17,000*l.* The town council was authorised to borrow 650,000*l.*

M. CLERMONT-GANNEAU suggests that a museum illustrative of the exploration of Palestine should be formed in London, and in which objects might be arranged according to some system. It should consist, he says, of a vast building in which would be placed together, not only all the local antiquities, all the monuments which could be obtained, but also reproductions in fac-simile, or casts, of monuments that cannot be displaced or that exist in other museums, plans in relief on a large scale, photographs, stereoscopic views, complete and attractive specimens of the animals, flowers, &c., peculiar to the country, costumes, ethnical types, tools, arms, instruments, geological specimens picturesquely arranged, &c. It would be well to join to these an extensive and animated panorama of the Holy City, and dioramic views of the principal localities and of characteristic scenes of popular life in Palestine, in order to add to this scientific combination an irresistible element of attraction and success. A library, containing all the principal publications relating to the Holy Land, and receiving any fresh ones as they appear, should be annexed to it, and put at the disposal of students; rooms reserved for popular or learned lectures. In short, in the centre of London should be created a representation, as faithful, varied, and complete as possible, of Palestine, past and present, which would be as a living commentary on the Bible.

In the International Exhibition of 1851 there was a fine collection of specimens of woods which had been obtained by the industry of Mr. SAUNDERS. From its completeness and interest it was adapted for one of the public museums, but it was not purchased. At the present time there is no collection in Kew or elsewhere in England which will furnish the information respecting timber which is often desired. It appears that the Americans are wiser. The Central Park Museum, New York, contains a collection provided by Mr. MORRIS K.

JESSUP. It comprises every American tree. The pieces obtained are five feet long, and care has been taken to preserve the bark and lichens so that some idea may be formed of the appearance of the tree in the forest. Transverse, longitudinal, and oblique sections are also shown. If the authorities desired, they might be able to do much towards obtaining a similar collection by arranging with the exhibitors of forestry in Edinburgh.

A FEW letters have appeared in the *Times* on the removal of gravel from the foundation of houses. As is usual, the custom which prevails where no architects are employed is supposed to apply to all buildings. One writer relates what was done by the late Sir CHARLES BARRY when rebuilding the College of Surgeons. In digging the foundation the contractors came on a remarkably fine bed of gravel, of so much value that they readily disposed of a large quantity, until Sir CHARLES BARRY on visiting the works at once put a stop to any more being removed, and compelled the contractors to replace what they had taken away with washed Thames gravel and fine powdered lime, well mixed, which concrete made a fine foundation, but cost the contractors far more than they obtained by the sale of the gravel. Clients may be assured that, unless there were arrangements to the contrary, every architect would imitate Sir CHARLES BARRY's example.

THERE are many advantages in having residences near museums for the principal officers. A keeper of a department whose heart is in his work (and no other is fitted for the office) will not be bound by the official five hours a day. He needs often to be at his post before and after the time which answers in Government offices. Sir HENRY COLE, who was not wanting in shrewdness, had official residences erected at South Kensington long before the museum was completed, and the State has been paid in extra work. In the new Natural History Museum no provision has been made for residences, and the reasons for the omission are rather strange. The Government, it appears, arranged that the police should be on duty in the building, and in consequence the advantage of having always one of the principal officers on the spot has been ignored. An ignorant constable is supposed to be an eligible substitute for such a man as Dr. GÜNTHER or Mr. FLOWER. The Trustees have repeatedly declared that "the security of the collections and the government of the museum will not be properly provided for without residences within the precincts, to enable keepers to be at hand at all times, and prepared for all casualties." Afterwards the Trustees declined to hold themselves responsible for the safety of the collections in the absence of an official residence. The Government have considered the subject, but still adhere to the original resolve. As there is plenty of space to build residences, it is difficult for the non-official mind to understand what is the reason for the objection to the residences.

THE power which publicans can exercise in this country has been exemplified in the opposition which has been raised against the completion of a large block of buildings by the Manchester Corporation. Ten years ago a plot of ground containing 5,000 yards was sold to a limited liability company by the Corporation for 284,581*l.*, but only 5 per cent. of the purchase-money was paid. The company proposed to erect an ambitious collection of buildings; but after expending 120,000*l.*, they were forced to stop the works. From their position the unfinished buildings were most unsightly, and impressed strangers with no exalted opinion of the wealth of Manchester. At length the Corporation were compelled to deal with the carcasses of the buildings, and, for the sake of the amenity of the city, to complete the works. This was done with the sanction of the Local Government Board, and under the authority of an Act. It was necessary to carry out the original plan, which included an hotel. It is now objected that the Corporation have no right to set up an hotel in opposition to the ratepayers who are innkeepers. The majority of strangers who visit Manchester will hardly take that view, for the city is below other towns in respect of its hotels. If the plans had been prepared under the inspiration of the Corporation, probably an hotel would not form part of the scheme; but as one was commenced it was necessary to complete it, and the Corporation are simply "making the best of a bad bargain."



## ILLUSTRATIONS.

DESIGNS FOR THE ADMIRALTY AND WAR OFFICES.

WE publish this week two more of the nine designs which formed the second competition. One is the Gothic design by Messrs. GLOVER & SALTER, of Poultry, E.C., and the other is the design by Messrs. MALCOLM STARK, jun., and JAMES LINDSAY, of Glasgow.

## THE ARCHÆOLOGY OF ILKLEY.

A LARGE party, the members of the Yorkshire Archæological and Topographical Association, visited Ilkley on August 27, where the church, Saxon crosses, and other antiquities were examined. Papers were read by the vicar, the Rev. A. C. Downer, and Mr. J. Romilly Allen.

*Ilkley Church.*

The Rev. A. C. Downer, in the course of his paper, said:—In greeting the members of the Yorkshire Archæological and Topographical Association, I may say that it is with sincere pleasure that I welcome them to-day to a spot so rich in historical remains as Ilkley. The field to the north of the churchyard is probably virgin soil so far as discoveries of this kind are concerned, and it would be a work worthy of the Association to undertake, with the owner's permission, to search it. From time to time many antiquities have been found either in the churchyard or in other parts of Ilkley, but many of them in past years were carried off by visitors, who purchased them from workmen and others. It is to be hoped that a more enlightened spirit is now prevalent, and that for the future Ilkley will retain its own treasures. It would be a very satisfactory result of the visit of this Association if a local museum were established in which such remains as may be recovered might be preserved and future discoveries collected. The church and churchyard are particularly rich in these, as it will be known to those present that they occupy the site of the ancient Roman fortress. Coins, pottery, and other articles have been found from time to time in digging graves, and I have a few of these in my possession. The tower was no doubt constructed of the stones of the fortress, as is evidenced by the sculptures still to be seen on the north side of the interior. It was always a puzzle to me when I first came to Ilkley why the arch of the tower was not in the middle, and this was not cleared up until the restoration in 1880, when the plaster was removed from the walls. It then appeared that the original nave wall and clerestory on the south side sprang from the same arch as that on the north side, as can be seen now that the stones are exposed; but at that period, no doubt in consequence of the growing requirements of the place, it had been put back to its present position, and possibly the south aisle added. If this is the case, the church would probably at that time be only one-third of its present size. In connection with the tower there is a niche at the south-east corner of the exterior, above the roof, the object of which I am unable to explain. On the north side of the nave there is a very curious old chapel, which appears to be of earlier date than the rest. The two floriated capitals north and south, at the east end of the nave, are modern, being put in at the restoration in 1861. I believe that eastward from these pillars the church was entirely rebuilt. The church, is, therefore, new and enlarged, and consequently does not call for special remark. The north aisle bears evident tokens of age, and I should say is, near to the door, the oldest portion of the church. There is, however, nothing in it to equal the south doorway, which is a fine specimen of the Norman style. It appears certain that there was at one time a chapel or chantry at the east end of the south aisle, dedicated to St. Nicholas, and, I assume, founded by the Myddelton family. Hopkinson's MSS. in the Leeds Public Library say that William, son of Sir Adam de Myddelton, whose tomb is in the chancel, date 1315, founded a chantry at the Ilkley Church, dedicated to St. Nicholas, and valued at 4*l.* 7*s.* a year. With respect to the antiquities in and about the church, the foremost are the crosses—whether Celtic or Saxon I must leave to the competent hands of Mr. Romilly Allen. I have been to the British Museum about having them housed, but they are considered safer in their present position. Pieces of stone, similarly marked to the crosses, are seen in the window of the south aisle; and another rather different, and now in the vestry, was taken from the clerestory when the windows were made there in 1880. A piece of a different pattern, yet in which the convolutions interlace, found in the Wharfe, has been taken to Myddelton. With regard to the Roman stone in the tower, it is said that there are two—one an altar embossed with a patera, and one the figure which Dr. Whitaker says is representing Hercules strangling the serpents. I regard that as a wild guess. The figure, from its rounded shoulders and general proportions, appears to me rather that of a woman than of the muscular hero; and I venture the suggestion that it represents Verbeia, while the wavy objects she holds in her hands may represent the river over which she presided. In

the north wall of the chancel, with an incised plain cross upon it, is a stone which was either a stone coffin or a very rough grave-stone. There are two piscinæ, one new one marking the site of the old chantry, and the old one removed from that place to the chancel, with what object I cannot say. There are a number of brasses in the church. The most interesting are the set of Heber memorials, and two on the ground near the reading-desk to Richard Hodgson and his son. The ancient oak work was unfortunately reduced in 1861, when much of it passed into the hands of the contractor, and, I fear, is past recovery. There remains an old pew, dated 1633, at the west end, and probably originally erected by a member of the Watkinson family, then an important one in Ilkley; and against the tower is some panelling of the same period, with pretty leaf-work and in good preservation. The register commences with the year 1597, and is in good preservation. A small portion of it has been preserved for generations in a private family, but it may be hoped that it will ultimately be restored to its original position. There are also books of the Dole Churches and old relics of churchwardens' accounts, appointments of sextons, dogwhippers, &c.

*The Ilkley Crosses.*

Mr. J. Romilly Allen read a paper on the Ilkley crosses. He said:—The history of the Ilkley crosses takes us back to the dawn of Christianity in the north of England, when Yorkshire formed a portion of the kingdom of Northumbria, which extended from the Humber to the Forth. Shortly after the departure of the Roman legions from Britain, the English invasion burst in all its fury upon our shores, and separated the Church of Ireland from the rest of European Christendom by an intrusive wedge of heathenism. No sooner, however, had the English settled down in their new home than this wedge of heathenism, which had been driven by sheer brute force into the midst of a Christian community, experienced the moral strength of the Gospel of Christ pressing on it from both sides. Thus, whilst Augustine brought the Christianity of Rome to the shores of Kent, Columba carried the Celtic Christianity of Ireland to Iona, whence Aidan went forth as a missionary to Lindisfarne, where a centre was established for the conversion of Northumbria. The moral effect of Aidan's teaching was to substitute civilisation for barbarism. One of the material results which accompanied it is now before us in the beautifully sculptured crosses, which, after being associated with the changing fortunes of Ilkley for a thousand years, still bear witness to the triumph of the religion of Christ over that of Woden and Thor. The earliest Christian memorials in Great Britain are rude pillar stones, untouched by the chisel, except where an inscription is cut in debased Roman capitals on cryptic oghams, the language being either Latin or Celtic. They belong to the transition period between Paganism and Christianity, and are found only within the purely Celtic area of Wales, Scotland, Ireland, and the West of England. Some of these pillar stones are possibly as old as the fourth or fifth centuries, although the dates of none of them have been ascertained from historical evidence. Next in age to the pillar stones come the elaborately carved crosses, such as those at Ilkley, ranging as regards date between the seventh and eleventh centuries. The characteristic features of these crosses are as follows:—(1) The cross is either hewn out of one block of stone, or the head is formed out of a separate piece and mortised into the shaft, the whole being firmly fixed in a solid stone base or socket. (2) The shaft is of rectangular section, tapering towards the top, and the head has four circular hollows at the angles, formed by the intersection of the limbs, and the limbs are often encircled by a ring. (3) The ornament is usually arranged in panels, separated from each other by horizontal bands, and a bead or cable moulding runs up the angles of the shaft. (4) The ornament is typically Celtic, and similar to that found in the MSS., and on metal-work of the same period in Ireland, consisting of spirals with expanded ends, key patterns arranged diagonally, interlaced work, dragonesque shapes, scrolls of foliage, and scenes from Scripture. (5) The inscriptions, when they occur, are generally to the effect that "A erected this cross to the memory of B. Pray for his soul." The characters are either Saxon uncials, Irish minuscules, or Scandinavian runes, and the language old English or Latin. There is considerable difference of opinion as to why those crosses were erected. Some such as those formerly existing at Ripon marked the boundaries of sanctuary, others are, no doubt, memorial, and I think it quite possible that many were set up by the early missionaries to commemorate the conversion of a district, and to mark the site of the church, which was to be built when the necessary funds were collected. The dates of most of these crosses can only be arrived at approximately, but it is known that the characteristically Celtic patterns with which they are adorned originated in MSS. in the seventh century, and attained the highest perfection in sculptured stonework in the beginning of the ninth century, and in metal-work in the tenth and eleventh centuries, finally becoming extinct after the Norman Conquest. The Lindisfarne Gospels, the glory of the Cottonian Library in the British Museum, exhibit the most perfect specimen of Hiberno-Saxon illumination we possess, and the date is known to be between 698 and 721, as they contain a memorandum showing that they were executed by



the orders of Bishop Eadfrith, the successor to St. Cuthbert. The magnificent Celtic cross at Clonmacnois, which marks the culminating point of Celtic art in stonework, bears an inscription showing that it was erected by the Abbot Colman, and its date is fixed by historic evidence as being 914. The processional cross of Cong, which is in the best style of Celtic metal-work, bears an inscription fixing its date in the year 1123. Having now discussed the subject from a general point of view, I propose to call attention to the peculiarly-interesting features of the Ilkley crosses. The first historical notice we have of these monuments is in Camden's "Britannia," where they are briefly referred to as "pillars of Roman work." All that now remains of what must once have been three very beautiful crosses are the complete shaft of the central one and the mutilated shafts of those on each side. The mortice holes for fixing on the heads of two of them still exist, and in the grounds of Myddelton Hall is a portion of one of the heads. A few years ago the base of the central cross was surrounded by three circular steps, which concealed the lower portion, as can be traced by the weathering of the stone. One of the other shafts was used for a long time as a gate-post in the churchyard wall, and consequently shockingly defaced. All three shafts are now securely fixed in a new stone base, and it is to be hoped that there is no further chance of injury. The central shaft is the most important, both on account of its great size and the special interest of the sculptures. On one side are the symbols of the four evangelists, and on the other the Lord holding a pastoral staff. From the third to the thirteenth centuries Christ surrounded by the symbols of the four evangelists is one of the most common subjects which occurs upon Christian monuments, but the method of representation changed considerably as time went on. In the catacombs at Rome in the early centuries Christ is symbolised by the cross and the four evangelists, by four books or scrolls at each of the corners, or, again, Christ is represented as the Agnus Dei, standing upon the mountain of Paradise, from the base of which issue four rivers, which are the four evangelists. As early as the sixth century we find the evangelists symbolised by the four beasts described in the Apocalypse, St. Matthew having the face of a man, St. Mark that of a lion, St. Luke that of a bull, and St. John that of an eagle, and they carry either books or scrolls in their hands. Generally the bodies are those of winged beasts, but on the Ilkley cross the bodies are human. This curious deviation from the usual method of representation occurs only in a few rare instances, as on a Saxon slab at Wirkworth Church, in Derbyshire, and in one or two MSS. Above the Norman doorway of Adel Church is a good example of Christ as the Agnus Dei surrounded by the four symbolical beasts. In connection with the present subject it may be mentioned that the cross of Clonmacnois, in Ireland, which is sculptured with scenes from the life of our Lord, is referred to in Irish annals, under the date 1060, as the "Cross na Screaptra," or cross of the Scriptures, and the same name might fairly be given to the cross of Ilkley. Three of the panels of the central shaft are sculptured with grotesque animals, arranged systematically in pairs facing each other, or shown singly with one paw upraised and the tails interlaced. The two sides are ornamented with scrolls of graceful foliage, such as occurs on many of the stones of this period within the ancient Northumbrian area, but not in the Celtic MSS., or on stones in Scotland north of the Forth, or in Wales or Ireland. The carving on the two smaller shafts is of a similar character with that on the centre one, consisting of conventional foliage and animals, together with interlaced work, and in one case a human figure holding a book. The meaning of the monstrous animal forms which are found so frequently upon the stones of this class has not yet been satisfactorily explained, but perhaps a study of the various manuscripts of the Middle Ages may eventually throw more light on the matter. In addition to the shafts of the three crosses in the churchyard, there are fragments of at least two others preserved within the church. In conclusion, I hope I have succeeded in showing that the Ilkley crosses are historical landmarks of the very highest importance, both as bearing witness to the establishment of Christianity upon this hallowed spot one thousand years ago, and testifying to the comparatively advanced stage which art culture had reached in Northumbria at that remote period.

#### *The Rock Sculptures of Ilkley.*

Mr. Allen then read a paper on "The Rock Sculptures of Ilkley." He said:—"Perhaps one of the greatest charms of the scenery of this part of Yorkshire is the way in which, by climbing a few hundred feet up a hillside, one passes suddenly out of the fertile valley, with its broad meadows, to find oneself in the midst of wild moors covered with purple heather and grey weather-stained rocks. An equally rapid change takes place with regard to the archaeological surroundings. Roman camp and altar, Christian cross and church are left behind, and we find ourselves face to face with the burial mounds and sacred rocks of the primæval men. It is with the sculptures on the latter that we have now to deal. Upon the south side of the valley of the Wharfe, behind the town of Ilkley, is a line of the gritstone crags, extending for about four miles from the Cow and Calf towards Addingham, and rising gradually from 800 feet to 1,000 feet above

the level of the sea. These crags form the line of demarcation between the fertile valley of the Wharfe and Rumbolds Moor and the prehistoric sculptures which form the subject of the present paper. The most important groups are situated near the Panorama Rock and near the Cow and Calf. The sculptures belong to the class known as the cup-and-ring markings, on account of their shape. The simplest form is a cup-shaped depression, varying from 1 inch to 3 inches in diameter. This is often surmounted by one or more concentric grooves about an inch wide and the same distance apart. Sometimes there is a straight radial groove, and, lastly, the ends of these radial grooves are in many cases connected by an elaborate system of channels. Cup markings were observed at Old Berwick, in Northumberland, as far back as 1825. I believe that the late Dr. Call was the first to notice the rock sculptures at Ilkley, and it is entirely to him that I owe my knowledge of their existence, although it is to my friend Mr. Fred Fison I am indebted for having been shown several new examples. There are a large number of sculptured rocks on Rumbolds Moor already known, and no doubt there are many more yet to be discovered. Most of the sculptures are of the usual type, but there are others that call for comment. Near the Panorama Rock are three large masses of ironstone close together, and averaging ten to twelve feet across each way, the horizontal surfaces of which are covered with cups and rings, and two of these stones have also a peculiar arrangement of grooves somewhat resembling a ladder in form. This pattern occurs in only one other stone at Ilkley, which was discovered by Mr. Frederick Fison in 1878. At Woodhouse Crag is a mass of gritstone bearing a pattern which also occurs in Sweden, namely, that of the Swastika or Buddhist cross. It would seem, therefore, that there is thus established a link between the sculptures of Sweden and Ilkley. Besides the variations in the carvings upon the stones on Rumbolds Moor, it must be noticed that many of the rocks upon which the sculptures occur are very remarkable in shape, and often have curious names. The stones on Addingham High Moor are striking, both as regards form and position. Having thus glanced briefly at some of the most characteristic features of the Ilkley rock sculptures, we lastly come to the question of their origin and meaning. There is no satisfactory theory on the subject, though the mystery may in time be solved. The Druidic theory is played out, and our knowledge of the Druids consists only of a few passages from Latin authors, which, collected together, would go on to a sheet of ordinary note paper; and there is nothing absolutely to connect them with the megalithic remains of the pre-historic period. In endeavouring to form a theory as to the origin of cup and ring, the first thing that strikes one is the monotony with which the same features are repeated over and over again, and the utter absence of any arrangement or design of any kind in the position of the figures relative to each other. I think from these two peculiarities we may deduce the following:—(1) That the cups and rings were either sacred symbols, or that the cups and grooves were adapted by their shape to some ceremonial use; (2) that the irregularity in the arrangement can only be accounted for by the fact that they were executed by different persons at the same time, or by the same person at different times. There is a good deal to be learned from the geographical distribution of rocks with cup markings. There are in England and Wales 102, in Scotland 204, in Ireland 42, France 21, Switzerland 32, and Scandinavia 42. In all these cases the sculptures are of exactly the same type except in Sweden, where the drawings are associated with rude drawings of men, animals, &c. It is evident that the race who carved these rocks must have spread or passed over the greater part of Europe, for the most important fact connected with the cup and ring markings is their being found in a large number of instances in connection with sepulchral remains, such as stone circles, cist and urn covers. We are thus enabled to say with certainty that some at least of the cup-marked stones are of the bronze age, on account of the sepulchral remains found in connection with them. Cup marks are applied to superstitious uses still in many places. Cup marks have been found in India on rocks and sepulchral monuments, and it may eventually turn out that they are of Eastern origin, and that their meaning and use is still understood in that country.

#### THE SEVERN TUNNEL RAILWAY.\*

IN former days before railways existed, one of the coach roads between England and South Wales crossed the Severn near the place where a railway tunnel is now being made. In those times travellers left their coaches on reaching the Severn at New Passage on one side and Portskewet on the other, and crossed the river or estuary, which is there about 2½ miles wide, in open boats.

Later on, lofty wooden piers were made on the banks of the Severn at the two places just named; on to these the trains now run, and passengers there leave them, and are taken across the river by steam ferry-boats. The inconvenience of this journey is

\* From a paper by Mr. J. Clarke Hawshaw, read before the British Association at Montreal.



increased by the great rise of tide, amounting at springs to over 40 feet.

To do away with this break in the railway communication between the two parts of the country, plans were submitted to Parliament, one for the construction of a bridge, and the other of a tunnel.

In the year 1872 Parliament sanctioned the construction of a tunnel, and the work was begun in March 1873 by the Great Western Railway Company. Shafts were sunk, and from them driftways were driven on the line of the tunnel. In this preliminary work no great difficulty was encountered, and the driftway under the river was nearly completed, only 130 yards remaining to be driven in order to effect a junction, when a large spring burst into the driftway, driven landwards from Sudbrook, and drowned the works under the river.

This happened on October 16, 1879. Sir John Hawkshaw, who had previously acted as consulting engineer, was appointed engineer-in-chief in conjunction with the engineer Mr. Richardson, and a contract was made with Mr. T. A. Walker for the completion of the works. Considerable progress has been made with them during the last 4½ years, and the tunnel is now rapidly approaching completion.

The line selected for the tunnel is about half a mile south of the steam ferry between New Passage and Portskewet. The Severn is there about 2½ miles wide, and is a tidal estuary rather than a river. Owing to the great rise of tide the current is very rapid, reaching 10 to 11 knots in certain states of the tide. The bed, which is laid bare over two-thirds of the width of the estuary at low water, consists throughout of rock or shale. There are three depressions in it. The most considerable, called the "shoots," is half a mile from the Welsh shore, and has a width of 550 yards, and a depth of 60 feet at low water and 96 feet to 100 feet at high water.

A section made on the line of the tunnel would disclose below recent surface deposits a series of trias marls and sandstones lying in nearly horizontal strata on highly-inclined beds of coal measure, shales, and sandstones.

The tunnel itself passes for the greater part of its length through trias mostly in the form of nearly horizontal beds of marl, much jointed, the joints often open, and yielding in many places a great quantity of water; near the eastern face the upper part of the tunnel for a short distance is in the gravel overlying the marl, then wholly in marl, passing before the coal measures are reached into a compact fine grained sandstone. The passage from trias marls to the coal measures, which takes place at a distance of about a mile from the sea wall is abrupt owing to faulting. For the remaining distance under the river the rocks traversed consist of coal measure shales and sandstones, under the shoots; where the cover above the tunnel is only 45 feet the sandstone is strong Pennant, much broken and jointed, though sometimes in massive beds. Much water flowed from the open joints in this sandstone in many places.

The tunnel continues in the coal measures for a distance of about a quarter of a mile after reaching the Welsh shore, where they are found in the form of red shales and sandstones, generally very free from water. From these shales the tunnel passes gradually into the overlying conglomerate at the base of the trias. This was the most troublesome formation to tunnel through. At the middle shaft it is 26 feet thick, full of open fissures discharging a great volume of water. From the conglomerate the tunnel again passes into the trias marls, and continues in them for the remaining distance to the western face.

The total length of the tunnel when finished will be 7,664 yards (about 4½ miles); the length of the tunnel sanctioned by Parliament in 1872 was 4½ miles, but in 1883 an application which was granted was made to reduce the length by 13 chains, by substituting that length of open cutting for tunnel at the Welsh end. This was done with a view to obtain material for making embankments for sidings at Rogiett Station, where the Tunnel Railway joins the South Wales line.

Another important alteration was made in the design after the works had made considerable progress. When Sir John Hawkshaw was appointed engineer in 1879, he recommended that the line of the tunnel should be lowered 15 feet under the Severn in order to obtain more cover. The lowest part of the line was placed under the shoots, the deepest part of the estuary. The minimum cover then was 30 feet, which has been increased by lowering the level 15 feet to 45 feet. Under the shoots the line will be on the level for 12 chains. From this level piece the line rises with a gradient of 1 in 100 towards the English end and 1 in 90 towards the Welsh end. Originally the gradients were 1 in 100 each way. The gradient on the Welsh side was made steeper in order to avoid deepening the cutting at the Welsh end, and so save excavation. As the heavier loads are mostly from Wales to England, this alteration of gradient will not be much felt in working the line; and as very little of the Welsh incline lies under the river, there is only a short length of tunnel under the Severn which will not be lowered the full 15 feet. The English incline has been lowered 15 feet throughout. This alteration added about 430,000 cubic yards of excavation to the cutting at the English end.

Prior to this alteration a drainage driftway had been driven from the pumping shaft at Sudbrook to the lowest part of the tunnel heading under the shoots. A second heading has now been driven at a lower level to drain the tunnel as it is being constructed. This heading is circular and 5 feet in diameter inside the brickwork (13½ inches thick), with which it is lined throughout. The tunnel is for a double line of way, lined throughout with brickwork. The top is a semicircle of 13 feet radius, with curved side walls and invert.

The transverse section of the tunnel shows the lining of brickwork to be 2 feet 3 inches thick. This was the contract section; but under the shoots under the Salmon Pool, and in other parts where the nature of the ground rendered it advisable, the thickness was increased to 3 feet in the arch and side walls. In a few places the invert was reduced to 1 foot 10 inches and 1 foot 6 inches in thickness. The bricks used are all vitrified. They are frequently tested with an hydraulic machine kept on the works for the purpose, and have borne from 25 tons to 70 tons without cracking, and as much as 77 tons before they were crushed. Some came from Staffordshire, some from the neighbourhood of Bristol, and from Cattybrook in Gloucestershire, near where the tunnel line joins the line from Bristol. They are all made from coal measure shales. As these shales are met with in the works, the contractor has erected crushing mills, drying sheds, and kilns, and makes 150,000 to 170,000 a week for use in the works.

The greatest amount of brickwork that has been done in one week is 2,000 cubic yards, requiring two-thirds of a million bricks. The brickwork is all set in mortar made of one part of Portland cement and two parts of sand. When much water was met with, it was led to pipes which are built into the brickwork. Some of these have been plugged up, but through many of these the water is still flowing. The largest pipe required for this purpose is 6 inches in diameter, from which a stream of water of the full section issued under considerable pressure at the time of high tides. Pipes could be only used when the water to be dealt with came in a definite stream from a fissure. In many cases in marl the water issued all over the section of the marl exposed in the excavation. It then became necessary to cover the whole surface with roofing felt in two thicknesses before any brickwork could be set. The time occupied in doing this, and in making other arrangements for keeping the water off the brickwork, more than trebled the total time which would have been required to finish a length of brickwork in a dry section of the tunnel.

The only really dry parts of the work were those in the fine-grained trias sandstone under the river in some of the coal measure shales, and in the higher beds of the trias marl and sandstone near the west end of the tunnel.

Some of the excavation for a short distance near the east end of the tunnel was in gravel. This owing to its loose and open nature required very heavy timbering. Almost the whole of the remainder, the exception being a short length of the softer coal measure shales, was in material so hard as to require blasting. Holes were drilled partly by hand and partly by machines worked by compressed air. When the Great Western Railway Company were carrying on the works themselves they used a machine made at their works at Swindon, and as a number of these were handed over to Mr. Walker when he took the contract, a great part of the work was done with them. They are very rapid in doing their work, but require constant repair. Several other drills were tried, the Darlington being most in favour owing to its scarcely ever wanting repairs. Several sorts of explosives were used, but torrite principally; its fumes being found less noxious than those of dynamite. As much as 6,000 lbs. have been sometimes used in one week. The greatest amount of excavation in tunnelling done in any one week was 6,000 cubic yards.

The driftways as originally driven were bottom driftways, but owing to the tunnel being made at a lower level than was originally intended, and the gradient altered, they became neither bottom nor top driftways in most places, and it was necessary to drive a new bottom driftway almost throughout the whole length of the work.

From the driftways breakups were made at intervals of about two to five chains. Some timbering was necessary in almost every length. In the gravel and shales this was of the heaviest description. Some of the Pennant, the dolomitic conglomerate, and some of the trias sandstone, stood with little or none.

Four steam-navvies are now at work in the cutting at the English end, which contained 790,000 cubic yards of excavation. This cutting is almost wholly in alluvium gravel and sand. The cutting at the Welsh end is partly in alluvium and partly in trias sandstone; it is now nearly completed.

Embankments are made along the sides of the cuttings throughout their lengths to protect the tunnel in the event of the low lands through which they pass being flooded.

The total quantity of water now being pumped is about 19,000 gallons per minute. Four beat valves of gun-metal are used in all the large pumps, and they have been found to work very satisfactorily.

On the 4½ miles of tunnel there are shafts at seven points, viz., at each face and at five intermediate points. The greatest dis-



tance between any two shafts is 2 miles 25 chains between the shafts at the sea-wall and Sudbrook, which are separated by the Severn. The other shafts are from 25 to 40 chains apart at sea-wall, and also at middle shaft; there is in addition to the winding-shaft a pumping-shaft, and at Sudbrook there are now three pumping-shafts and one winding-shaft; one of these three pumping-shafts was till lately used as a winding-shaft. All the pumping-shafts except the last-mentioned are off the line of the tunnel, and connected with the works by culverts, which can be closed by sluices, so that in the event of a pump breaking down, the shaft can be kept dry by closing the sluice until the repairs are done.

The shafts were all lined with brickwork set in Portland cement mortar, excepting that at the west face, which was not lined, and one pumping-shaft at Sudbrook intended to be a permanent pumping-shaft, which is lined with cast-iron tubing.

As has been already stated, the driftways originally driven were bottom driftways, but owing to the alteration in the level of the tunnel they ceased to be so before the enlargement, for the permanent work was begun under the Salmon Pool, and, under the shoots the arch of the tunnel was turned without side walls from the existing driftway. It was, however, soon found necessary to drive a new one at invert level for drainage purposes throughout nearly the whole length of the work.

The driftways were from 7 feet to 9 feet square. Timber was not required in them in the more compact beds of marl and sandstone and in the conglomerate.

So long as the driftways from the different shafts were in progress ventilation was effected by the compressed air which was used for the rock-drills, supplemented in one or two cases by pipes of larger diameter, through which air was forced by blowers. After the driftways had been joined under the river a fan was provided at Sudbrook, 18 feet in diameter by 7 feet wide, worked by an engine of ten horse power. This fan effectually ventilated the workings under the river. Electric light is largely used both above ground and in those parts of the workings underground where the brickwork is completed. Lights of 2,000-candle power are suspended at intervals of about ten chains in the finished parts of the tunnel. Much vitiation of the air is prevented by the use of these lights.

### PRE-HISTORIC ARCHÆOLOGY IN AMERICA.

AN address was delivered by Dr. E. B. Tylor, as president of the section of Anthropology at the meeting of the British Association in Montreal, in which he referred to the relations between the eastern and western parts of the globe. The following is an extract:—Of late no great progress has been made toward fixing a scale of calculation of the human period, but the arguments as to time required for alterations in valley-levels, changes of fauna, evolution of races, languages, and culture, seem to converge more conclusively than ever toward a human period, short indeed as a fraction of geological time, but long as compared with historical or chronological time. While, however, it is felt that length of time need not debar the anthropologist from hypotheses of development and migration, there is more caution as to assumptions of millions of years where no arithmetical basis exists, and less tendency to treat everything pre-historic as necessarily of extreme antiquity, such as, for instance, the Swiss lake-dwellings and the Central American temples. There are certain problems of American anthropology which are not the less interesting for involving no considerations of high antiquity; indeed they have the advantage of being within the check of history, though not themselves belonging to it. Humboldt's argument as to traces of Asiatic influence in Mexico is one of these. The four ages in the Aztec picture-writings, ending with catastrophes of the four elements, earth, fire, air, water, compared by him with the same scheme among the Banyans of Surat, is a strong piece of evidence, which would become yet stronger if the Hindoo book could be found from which the account is declared to have been taken. Not less cogent is his comparison of the zodiacs or calendar-cycles of Mexico and Central America with those of Eastern Asia, such as that by which the Japanese reckon the sixty-year cycle by combining the elements seriatim with the twelve animals, mouse, bull, tiger, hare, &c.; the present year is, I suppose, the second water-ape year, and the time of day is the goat-hour. Humboldt's case may be reinforced by the consideration of the magical employment of these zodiacs in the Old and New World. The description of a Mexican astrologer, sent for to make the arrangements for a marriage by comparing the zodiac animals of the birthdays of bride and bridegroom, might have been written almost exactly of the modern Kalmuks; and in fact it seems connected in origin with similar rules in our own books of astrology. Magic is of great value in thus tracing communication, direct or indirect, between distant nations. The power of lasting and travelling which it possesses may be instanced by the rock-pictures from the sacred Roches Percées of Manitoba, sketched by Dr. Dawson, and published in his father's volume on "Fossil Man," with the proper caution that the pictures, or some of them, may be modern. Besides the rude pictures of deer and

Indians and their huts, one sees with surprise a pentagram more neatly drawn than that defective one which let Mephistopheles pass Faust's threshold, though it kept the demon in when he had got there. Whether the Indians of Manitoba learnt the magic figure from the white man, or whether the white man did it himself in jest, it proves a line of intercourse sketching back 2,500 years to the time when it was first drawn as a geometrical diagram of the school of Pythagoras. To return to Humboldt's argument, if there was communication from Asia to Mexico before the Spanish Conquest, it ought to have brought other things, and no things travel more easily than games. I noticed some years ago that the Aztecs are described by the old Spanish writers as playing a game called patolli, where they moved stones on the squares of a cross-shaped mat, according to the throws of beans marked on one side. The description minutely corresponds with the Hindoo game of pachisi, played in like manner with cowries instead of beans; this game, which is an early variety of backgammon, is well-known in Asia, whence it seems to have found its way into America. From Mexico it passed into Sonora and Zacatecas, much broken down but retaining its name, and it may be traced still further into the game of plumstones among the Iroquois and other tribes. Now, if the probability be granted that these various American notions come from Asia, their importation would not have to do with any remotely ancient connection between the two continents. The Hindoo element-catastrophes, the East Asiatic zodiac-calendars, the game of backgammon, seem none of them extremely old, and it may not be a thousand years since they reached America. These are cases in which we may reasonably suppose communication by seafarers, perhaps even in some of those junks which are brought across so often by the ocean-current and wrecked on the Californian coast. In connection with ideas borrowed from Asia there arises the question, How did the Mexicans and Peruvians become possessed of bronze? Seeing how imperfectly it had established itself, not even dispossessing the stone implements, I have long believed it to be an Asiatic importation of no great antiquity, and it is with great satisfaction that I find such an authority on pre-historic archæology as Professor Worsaae comparing the bronze implements in China and Japan with those of Mexico and Peru, and declaring emphatically his opinion that bronze was a modern novelty introduced into America. While these items of Asiatic culture in America are so localised as to agree best with the hypothesis of communication far south across the Pacific, there are others which agree best with the routes far north. A remarkable piece of evidence pointed out by General Pitt-Rivers is the geographical distribution of the Tartar or composite bow, which in construction is unlike the long bow, being made of several pieces spliced together, and which is bent backwards to string it. This distinctly Asiatic form may be followed across the region of Behring's Straits into America among the Esquimaux and northern Indians, so that it can hardly be doubted that its coming into America was by a northern line of migration. This important movement in culture may have taken place in remotely ancient times. A brief account may now be given of the present state of information as to movements of civilisation within the double continent of America. Conspicuous among these is what may be called the northward drift of civilisation, which comes well into view in the evidence of botanists as to cultivated plants. Maize, though allied to, and probably genetically connected with, an Old World graminaceous family, is distinctly American, and is believed by De Candolle to have been brought into cultivation in Peru, whence it was carried from tribe to tribe up into the North. To see how closely the two continents are connected in civilisation, one need only look at the distribution on both of maize, tobacco, and cacao. It is admitted as probable that from the Mexican and Central American region agriculture travelled northward, and became established among the native tribes. This direction may be clearly traced in a sketch of their agriculture, such as is given in Mr. Lucien Carr's paper on the "Mounds of the Mississippi Valley." The same staple cultivation passed on from place to place—maize, haricots, pumpkins for food, and tobacco for luxury. Agriculture among the Indians of the great lakes is plainly seen to have been an imported craft by the way in which it had spread to some tribes but not to others. The distribution of the potters' art is similarly partial, some tribes making good earthen vessels, while others still boiled meat in its own skin with hot stones; so that it may well be supposed that the arts of growing corn and making the earthen pot to boil the hominy came together from the more civilised nations of the south. With this northward drift of civilisation other facts harmonise. The researches of Buschmann, published by the Berlin Academy, show how Aztec words have become embedded in the languages of Sonora, New Mexico, and up the western side of the continent, which could not have spread there without Mexican intercourse extending far north-west. This indeed has left many traces still discernible in the industrial and decorative arts of the Pueblo Indians. Along the courses of this northward drift of culture remain two remarkable series of structures probably connected with it. The Casas Grandes, the fortified communal barracks (if I may so call them) which provided house-room for hundreds of families, excited the astonishment of the early Spanish explorers, but are only beginning to be thoroughly



described now that such districts as the Taos Valley have come within reach by the railroads across to the Pacific. The accounts of these village forts and their inhabitants, drawn up by Major J. W. Powell, of the Bureau of Ethnology, and Mr. Putman, of the Peabody Museum, disclose the old communistic society surviving in modern times, in instructive comment on the philosophers who are seeking to return to it. It would be premature in the present state of information to decide whether Mr. J. L. Morgan, in his work on the "Houses and House Life of the American Aborigines," has realised the conditions of the problem. It is plausible to suppose with him a connection between the communal dwellings of the American Indians, such as the Iroquois long-house with its many family hearths, with the more solid buildings inhabited on a similar social principle by tribes such as the Zuñis of New Mexico. Morgan was so much a man of genius that his speculations, even when at variance with the general view of the facts, are always suggestive. This is the case with his attempt to account for the organisation of the Aztec state as a highly-developed Indian tribal community, and even to explain the many-roomed stone palaces, as they are called, of Central America, as being huge communal dwellings like those of the Pueblo Indians. I will not go further into the subject here, hoping that it may be debated in the section by those far better acquainted with the evidence. I need not, for the same reason, do much more than mention the mound builders, nor enter largely on the literature which has grown up about them since the publication of the works of Squier and Davis. Now that the idea of their being a separate race of high antiquity has died out, and their earthworks with the implements and ornaments found among them are brought into comparison with those of other tribes of the country, they have settled into representatives of one of the most notable stages of the northward drift of culture among the indigenes of America.

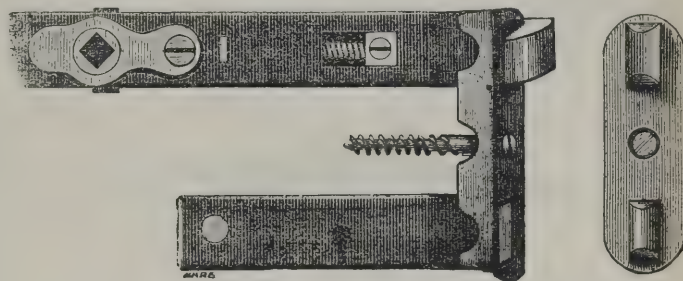
### ST. HELEN'S TOWN HALL.

AT the meeting of the St. Helen's Town Council on Wednesday the Parliamentary Committee, to whom the question of the decoration and renovation of the Town Hall buildings had been referred, recommended the Council to invite tenders for carrying out the following works:—Cleaning, painting, and decorating the whole of the interior of the building; the facing with a dado of tiles of the whole of the corridors and staircases; facing with marble the walls of the assembly-room as high as the cornice, and screens for platform; lining the whole of the walls of the council-chamber with oak or walnut panelling, including furniture, with clock over fireplace, panelling with sounding board behind the mayor's chair, and decorated frieze; rearrangement of surveyor's offices, embracing an extension of the drawing office, provision of plan-room, and consequent alteration of lavatories; alterations to enable the use of the room over the water engineer's office as a committee-room; wind screen or porch for Hardshaw Street entrance; repairs to roof and strengthening of gallery of assembly-room; heating and ventilation of the whole of the building. Estimated cost (not including repairs of roof and strengthening of gallery, for which the architect stated it was not possible to estimate), 6,539/.

### NOTES ON NOVELTIES.

**The "Chelsea" Improved Mortise and other Locks.**—The improvements made in iron safes since the first half of the present century passed away caused considerable rivalry amongst the better class of lockmakers, and those whose recollections carry them over the period named, may remember the challenges that have from time to time been issued by rival makers of sums of money to be awarded if anyone could pick their locks, and the names of Chubb, Cotterill, Hobbs, Tann, &c., are amongst those who have claimed to have invented these mechanical appliances that would baffle the most ingenious burglar or mechanic. But the staple lock trade of the country had undergone very little change during this time, and it was not until America some eight years since commenced to send her locks into the United Kingdom that the lockmakers of Staffordshire found it necessary to rouse themselves from the state of lethargy into which they had fallen, that is to say, in being content to make the same kind of goods year after year without any attempt at improvement. The first shipments of American locks here were certainly cheaper than similar articles of home make were then being sold at, and there were points about them worth attention. Then we were for a time deluged with the commoner sorts which, made principally of cast iron though of considerable malleability, were eagerly bought on account of their extreme low price by the ironmongers and speculative builders. Immense excitement was caused for a time in the hardware world, and trade journals were week by week teeming with prognostications as to the eventual collapse of the lock industry in this country. The Paris exhibition of 1878 tended to increase this feeling, for there American locks were in great force

and what was most disappointing to Englishmen interested in the question was, that our own makers were scarcely represented at all save by a few of the important "safe" makers, which gave a colourable sequence to the feeling before named. But our "cousins" were not allowed to revel long in the luxury they fancied they had attained. For a short time matters certainly looked adverse to English interests, but the low-priced locks were proved to be little else than rubbish, while as regards the better-class ones our manufacturers were enabled to produce locks with the best points contained in the transatlantic productions, but more suitable to English notions at a lower cost. Amongst the changes brought about by this *coup* has been a desire to reduce the size of the mortise lock, and in some instances of the keys, and to nickel plate the latter. Travellers on the Continent must often have been struck by the large size of the door locks, the majority of which are "rim," and of the keys also. The large key gives no additional security, and it has been clearly shown that the size of an ordinary lock can be reduced and prove as effectual as the old patterns. The "Chelsea" patent locks introduced by Messrs. Broughton & Co., 169 Queen Victoria Street, E.C., of which we give an illustration of the "Mortise," is a step in the direction we have mentioned;



and they are also made on the same lines in "Mortise Dead," "Mortise Latch," and "Mortise Night Latch." It will be observed that the solid square case is here dispensed with, and only two small ones, one 5½ inches deep and another 4 inches deep (which the makers advise to be made with a one-inch Jennings's screw-pointed centre-bit), with a third in the centre ½-inch deep, and it is claimed that a mortise lock may be fixed in five minutes, including the cutting of the holes. By this means the injury to the door is materially reduced, and knocking about with chisel and mallet is dispensed with. One screw only is required to secure the lock in its position, and this is so arranged that, by unscrewing it, the lock is simultaneously withdrawn, rendering its removal an easy matter for repairs, repainting door, &c. A much longer screw can also be used for securing the roses, as they do not come in contact with the case of the lock, but go into the solid woodwork above and below it. The latch, or "catch" bolt, is also reversible, and can be altered to right or left hand without opening the case. The bearings of the "follower" are extra wide, which insures longer wear, and the follower is constructed so that its action on the bolt shall be smooth both ways. The materials of which these locks are made are of the best description, the cases being of rolled steel with brass front plates, and the followers of gun-metal or phosphor bronze, and the parts work with the greatest ease and regularity. Very specific instructions are sent out with each lock for fixing, so that the most commonplace workman can understand them, and for a first-class lock the prices are very reasonable. We think that their advantages will be fully recognised by the profession, and for thin doors especially this will be brought out.

**Patent Gas Tubing.**—An elastic rubber tubing perfectly gas-tight and free from smell has been urgently needed for many years—in fact the impossibility of making satisfactory gas connections for gas apparatus which requires to be movable has rendered the use of gas as a fuel in many cases a most objectionable nuisance. The tubing recently patented is made of two layers of rubber, with pure soft tinfoil vulcanised between. It is perfectly and permanently gas-tight under any pressure, and free from the slightest trace of smell after long continued use, whilst it retains the flexibility and elasticity of an ordinary rubber tube. The braided or cloth-covered tube, which has been made with the intention of filling this want, has never come into general use owing to the very small quantity of gas it passes, rendering it almost useless except for small lighting burners; and also that special brass connections and screws have to be fitted to every burner, and to both ends of every length of tube. Both these serious faults are entirely done away with. This tube is the result of many years' experiments. Irrespective of the well-known fact that extremely thin layers of rolled or beaten metal are perfectly gas-tight, the tube has been in practical use for some time, and has been thoroughly tested under continuous and heavy pressures of gas. The inventor and manufacturer is Mr. Thos. Fletcher, F.C.S., of Warrington.

**Wood-Block Flooring.**—The subject of wood-block flooring is now receiving a considerable amount of attention, and, as most



of our readers will be aware, was discussed at some length at the Conference of Architects held a few weeks ago at the Health Exhibition. The general opinion expressed at this meeting, and in which we entirely concur was, that wood-block floors are in every respect to be preferred to the ordinary boarded floors, and no doubt the latter will in time be superseded to a great extent by the more solid and durable floor, as even now it is extensively employed. We believe that this flooring would have been more generally used than has hitherto been the case, but for one drawback—the liability of the blocks to become loose soon after being laid. This objection has not now, however, any standing, as for some time past this flooring has been laid—notably by Messrs. Geary & Walker, of Manchester—on a principle which is positively preventative of “loose blocks,” and is, moreover, essentially the system advocated by Mr. E. C. Robins, Mr. A. Waterhouse, and others who have had no inconsiderable experience of this class of flooring. In these floors it is very inadvisable for architects to permit the use of long and narrow blocks, as they are at all times liable to warp and become loose. Mr. Robins advises the use of 6-inch and 3-inch blocks,  $1\frac{1}{2}$  inch or 2 inches in thickness, and we certainly think that 9 inches, or, at the outside, 12 inches in length, should be the limit. The many ways in which this flooring can be treated renders it most suitable for almost every class of building, and there is little doubt that when its unmistakable advantages become more widely known, it will be generally adopted.



#### Tests of American Bricks.

Office Supervising Engineer and Architect,  
New Pension Building,  
1316 N Street N.W., Washington, D.C.

SIR,—Referring to your note in issue of August 9 upon the tests of bricks offered for the new United States Pension Building in this city, I send you a copy of the report of the officer who made the tests at the Watertown Arsenal of the United States. The testing machine is the one designed and built by Mr. Emory for the United States Government, under a special appropriation made by Congress for the purpose. The machine itself is accepted by all engineers and architects in this country as infallibly accurate. Its range is from the pulling asunder of a bar of steel with a pull of 800,000 pounds, to the breaking by extension of a horse-hair, and it gives exactly the strain which breaks either specimen.

Mr. Davis is in error in saying that no bricks have ever made so good a showing as the above. Over twenty-four years ago, while erecting the extension of the United States Capitol, I built a testing machine with which I made many tests of materials, some of which have found their way into the American handbooks of construction; and I then found and tested bricks which broke at 10,000 pounds to the square inch. The specimens broken were cubes of  $1\frac{1}{2}$  to 3 inches on the edges.

Very respectfully your obedient servant,

M. C. MEIGS, Quartermaster-General  
U.S. Army Retired.  
Architect, Pension Building.

#### Artificial Paving.

SIR,—We notice in your impression of August 30, under the head of “Notes on Novelties,” a notice of “Artificial Granite Paving,” in which, after expressing your surprise that artificial or concrete pavings (taking the term in its widest sense) have found so little favour in the eyes of local boards and vestries, you proceed to state that you consider the reasons are perhaps twofold, viz.:—First, that the very few who have introduced this substance have confined their operations to stables and such places; and secondly, that when brought out as a footpath for streets it was laid down in a manner not suited for such requirements.

We assume that you do not include the “Patent Victoria Stone” in the list of concrete pavings, and you are right in so doing; for although this material at one stage of its manufacture is a concrete, when the process is complete it becomes the nearest approximation to nature that has yet been attained, with perhaps the single exception of Ransome’s stone, so extensively used many years since for architectural purposes. But inasmuch as members of local boards and vestries are apt to put down all artificial or manufactured pavings in the same category, we shall be obliged, if you allow us, to state, for the information of your readers, should they consider us one of “the very few,” that our paving has during the last eighteen years been almost exclusively used for paving London footways, and that during that period over eighty miles taken at seven feet wide have been laid within the metropolitan area, and not to any considerable extent in “stables and yards.”

We can quite endorse what you say as to the difficulties of introducing novelties to public bodies, as, when the “Victoria Stone” was first introduced, several vestries in London refused the offer of an experimental length of paving free of cost. Such was the prejudice at that time against anything but the old-fashioned laminated York stone.

In speaking of “granite,” you doubtless mean any rock of igneous origin (and not, in its strictest sense, a composition of quartz, felspar, and mica) is undoubtedly a suitable aggregate when thoroughly clean for making concrete, but to say that this, when mixed with Portland cement, “must necessarily make as hard a footpath as anything we can use” is equivalent to stating that Portland cement at once attains its ultimate strength, and that any induration is unnecessary; this, we need hardly remind you, is not the case. The late Rev. H. Highton, the inventor of “Victoria Stone,” and an able chemist, seeing the necessity of some quicker mode of induration, struck upon his comparatively cheap mode of silicating, which is used in our works to this day, and we point to our paving for the practical results.

If the material you describe can be laid at 3s. 6d. per yard super, including excavation and foundation where necessary, it certainly has the merit of cheapness, but until you can insure good cement being delivered on to the ground, properly manipulated there, you can never get a good concrete path suitable for even suburban districts.

Yours faithfully,

THE PATENT VICTORIA STONE COMPANY  
(per Harry Rogers).

283A Kingsland Road:  
Sept. 3, 1884.

The gold medal of the International Exhibition at the Crystal Palace has just been awarded to us for “Victoria Stone” paving and general masonry.

Watertown Arsenal, Mass.: December 16, 1882.

Compression of Bricks, Tested for new Pension Building (Supervising Engineer and Architect), Washington, D.C. Bricks Tested between Flat Iron Compression Platforms. Compression Faces of Bricks Ground Flat.

No. of Test.	Marks on Brick.	Sectional Area.	Ultimate Strength.		Bearings.	Remarks.
			Total lbs.	Lbs. per sq. in.		
2,531	W. H. West & Bro.	Red	4'00" x 8'50" = 34'00	324,500	9,540	Even
32	"	Arch	3'95" x 8'50" = 33'58	255,200	7,600	Uneven, required
33	"	Press	4'20" x 8'50" = 35'70	231,000	6,470	or inch packing
34	Washington Brick Co.	Red	4'10" x 8'47" = 34'73	296,200	8,530	Even
35	"	Arch	3'89" x 8'30" = 31'54	324,500	10,290	"
36	"	Press	4'10" x 8'35" = 34'24	314,700	9,190	"
37	Childs & Son,	Red	4'15" x 8'40" = 34'86	211,000	6,050	"
38	"	"	4'10" x 8'46" = 34'69	209,300	6,030	"
39	"	"	4'10" x 8'45" = 34'65	232,000	6,700	"
2,540	"	Arch	3'70" x 8'10" = 29'97	203,700	6,300	1/2 inch packing
41	"	Press	4'20" x 8'40" = 35'28	210,200	5,960	under one corner
42	Burns, Russell & Co.	Press	4'30" x 8'38" = 36'89	249,000	6,750	Even

(Signed)

JOHN G. BUTLER,  
Captain of Ordnance, Commanding.



## WORKS IN PROGRESS.

**Church Clocks.**—On August 25, a large Cambridge quarter clock, with two outside dials, was set going in the parish church, Middleham, North Yorkshire, in the presence of the rector and churchwardens and a large company of the inhabitants, by Mr. John Topham, Middleham House, the clock being given by Sir Thomas Topham, Coverham Abbey. The following Wednesday another large Cambridge quarter clock, with four 6-foot dials, and striking upon the new peal of fine bells lately fixed in All Saints' parish church, Skelton, North Yorks, the ancient residence of the De Bruce family. This clock has been presented by Mr. J. T. Wharton, J.P., of Skelton Castle. Both the clocks—Middleham and Skelton—were manufactured by Messrs. William Potts & Sons, of Guildford Street, Leeds, who are also fixing another clock at Burton-in-Lonsdale Church, near Lancaster, and restoring the block and chimes of Beverley Minster, and fixing a new large dial.

**The American Elevator Co.,** of 38 Old Jewry, Cheapside, E.C., have just received the contract for a first-class passenger lift, to be erected in the Victoria Hotel, Sheffield, of which Messrs. Mills & Murgatroyd, of Manchester, are the architects.

## ARCHÆOLOGY.

**Remains of a Roman Villa at Lincoln.**—A few days ago some miners who were excavating a new mining shaft in the Greetwell Fields came upon the remains of a Roman villa. From the nature of the diggings, so much unavoidable damage had been done to the remains that all that is at present to be seen are some walls, a well seven feet in diameter, and portions of tessellated pavements, broken tiles, and pottery. This much, however, is clear, that between two walls running a considerable distance south and north, and fifteen yards apart, several apartments existed, as indicated by walls, tessellated pavements, and large flat tile pavements. From these apartments steps led down to a room which probably was a bath-room, and under the bath-room is a well, still in a comparatively good state of preservation. The tesserae of the upper apartments are chiefly of red and blue brick and white stone, but the tesserae of the bath-room are white, and are apparently made of hard concrete. All the tesserae are about an inch and a half square, and were laid on a deep layer of the ordinary Roman concrete. The large flooring tiles are red, and bear an impressed checkered pattern. On clearing out some of the rubbish from the well, fragments of wall plaster, probably of the bath-room, were found; these fragments show that the apartment, or apartments, must have been beautifully painted and decorated. The colours used in the painting were red, yellow, blue, green, and white, and the decorations were evidently executed with the greatest neatness and precision. On one piece of plaster is the picture of a swallow, well drawn and painted. The house must have been the property of a Roman gentleman of taste and opulence. The site was well chosen, but in consequence of the villa being built on the brow of a hill, the lower rooms were on different planes. Doubtless, if careful diggings were extended on either side of the mining trench, other Roman discoveries of a valuable character might be made.

## ENGINEERING WORKS.

**The Liverpool Docks.**—Mr. G. F. Lyster, engineer to the Mersey Docks and Harbour Board, has just published his annual report showing the general state and progress of the dock works at Liverpool and Birkenhead, together with the expenditure in his department for the year ended the 1st of July last. The report refers in detail to the work done during the year at the various docks of the estate both in Liverpool and Birkenhead. With regard to the high-level coal railway extension, it is stated that the additional accommodation for the shipment of coal is now completed and ready for immediate use. It consists of a high-level system erected on the north quay of the Bramley Moore Dock, in extension of that now in use on the east quays of the Wellington and Bramley Moore Docks. It is 908 feet in length by 63 feet in width, and is provided with a comprehensive system of railways, sidings, turntables, and capstans, and also with five 25-ton cranes for loading ships, and these are actuated by hydraulic power. In regard to the Sub-Mersey Railway Tunnel, the report stated that the drainage heading was so far completed in the early part of the year that a party of those interested in the undertaking walked through it on January 17, and the main tunnel is rapidly advancing towards completion. The total amount expended on the entire estate for the year had been 514,287*l.* 1*s.* 11*d.*, of which 430,466*l.* 2*s.* 5*d.* were for the Liverpool side of the river, 65,242*l.* 14*s.* 8*d.* for Birkenhead, while the conservancy expenses amounted to 4,189*l.* 13*s.* 4*d.*, and the official charges to 14,388*l.* 11*s.* 6*d.* During the year there had been expended on the new dock works at the North End 20,036*l.* 6*s.* 4*d.*, in addition

to the original outlay of 2,396,751*l.* 15*s.* 7*d.* The river craft dock had cost 11,408*l.* 4*s.* 2*d.* in the course of twelve months. The new works at the South End had during the year entailed an expenditure of 82,176*l.* 16*s.*, while the deepening of the new South Dock and sills had incurred an additional cost of 7,739*l.* 3*s.* 5*d.*

**Kirkcaldy Harbour.**—Sir John Coode, C.E., has just sent in his report, with an accompanying plan of the proposed new harbour for Kirkcaldy. According to the plan the harbour and dock works will be on a large scale, occupying the space of Ravenscraig rocks on the east to the pier of the present harbour to the west. The entrance to the outer harbour, which will be opposite the floorcloth works of Messrs. M. Nairn & Co., will have a depth of 10 feet at low water of spring tides—the entrance itself being 1,500 feet from the Castle rocks. The wet dock will cover an area of 8 acres, being thus 2½ acres larger than Burntisland Dock. The depth over the sill at the dock gates will be 21 feet at high water of neap tides. The dock occupies a position immediately in front of Messrs. Hutchison's malting premises. Sir John Coode estimates that these extensive works, capable of accommodating the largest class of merchant vessels afloat, will be obtained at an expenditure not exceeding 300,000*l.*

**Below Bridge Communication.**—A committee, consisting of Mr. Green, chairman; Mr. J. Brand, City Comptroller; and other gentlemen, appointed to inspect various large bridges throughout the country with a view to recommend to the Corporation of London the best style of bridge with which to span the Thames below London Bridge, have lately visited Leith. Mr. Whyte, dock superintendent, explained to the committee the construction of the Victoria Swing Bridge, which crosses the harbour, and connects the Victoria and Albert Docks. This bridge, which has two lines of rails upon it, and is worked by hydraulic power, was built by Sir William Armstrong, of Newcastle, at a cost of about 28,000*l.*

## CHURCH BUILDING AND RESTORATION.

**Lochgilthead, N.B.**—The memorial-stone of the new parish church was laid on the 21st inst. by Mr. C. Dalrymple, M.P. The building stands on the site of the old church, and will have seats for 400 worshippers. The estimated cost is 2,300*l.* Mr. John Honeyman is the architect.

**Campden Church.**—The parish church of Chipping Campden has been reopened after restoration of the interior. The exterior was renovated a few years ago, and a little over 1,000*l.* has now been spent in levelling and renewing the floor, providing new seats and choir stalls, removing and improving the organ, and other work. The present restoration has been carried out from designs of Messrs. Waller, Son, & Wood, of Gloucester.

**Leyburn.**—The memorial-stones of a Wesleyan chapel have been laid. The chapel will be in Early English style, and will accommodate about 300 persons. There is a schoolroom behind to accommodate 100 children, with two classrooms, and above there is the organ gallery. The internal woodwork will be of pitch pine, with open seat ends, the ceiling being boarded and panelled and circular pointed. Mr. C. Anderson, of York, is the architect, and the contractors are Mr. Jas. Peacock, brick and stonework; Mr. Alfred Sanderson, joiner's work; Mr. T. T. Dobson, plumber; and Mr. Thomas Horner, painter. The cost will be about 1,500*l.*

**Preston Candover.**—The foundation-stone of a new church has been laid. The site of the church, which is to be erected from plans prepared by Mr. A. W. Blomfield, is at the junction of the Wield and Alresford roads, in the centre of the village. The church will be in Early English style, built of flints, with red brick and stone dressings and windows. It will consist of a nave, chancel, north aisle, and vestry, and the entrance will be by a porch approached by a flight of steps. The architect's design includes a tower and spire, reaching to a height of 100 feet. The builders are Messrs. J. & E. Dyer, of Alton. The estimated cost is 3,300*l.*

**Stebbing.**—The parish church of St. Mary the Virgin, Stebbing, has been reopened after partial restoration. The tracery of the aisle windows, on the outside especially, being of the perishable clunch, still need restoration. Besides the aisle windows, the chancel, tower, and south porch remain untouched, all much in want of the restorer's hand. About 2,000*l.* more are wanted to complete the restoration. Mr. Woodyer is the architect, and Mr. S. C. Parmenter, of Braintree, the contractor.

**Beddingham.**—The parish church of St. Andrew has been reopened after extensive repairs to the walls and a complete renovation of the north aisle, nave roof, and belfry tower interior, carried out under the direction of Mr. W. White, F.S.A.

**Bolton.**—St. Matthew's Church has been reopened after renovation. The ceilings of the nave and transepts are coloured in distemper, the panels in each case being filled in with ornaments of a bluish grey. The timbers of the roof have been cleaned and varnished, and the coronæ and gas brackets repainted and gilded, whilst a new ornamental gas bracket has been placed



under the western window. The walls are painted in oil, finished with colours of a creamy hue, which brighten up the whole and aid the light considerably. The ornamentation on the walls is very chaste, the predominant tint being a brownish red, which has a pleasing effect. The spandrels between the arches are filled in with quatrefoils, in which are introduced floral devices, and beneath these are neat stencil bands. Ornamental bands are also carried below the spring of the clerestory windows, over the arches, under the frieze, and below the string-course beneath the windows. A bold ornamental design runs round the walls of the aisles and transepts level with the capitals of the columns, and the same pattern is introduced at the level of the frieze on the west wall of the nave and the end walls of the transepts. Plain bands of colour are run round the arches, those to the western end having ornamental finials. The lower portions of the walls are adorned with a dado of greenish grey, the ornamental pattern on the top forming a pleasing contrast to the quiet tone of the walls. The same designs are introduced in the "Green" chapel. The chancel ceiling and the walls are painted in oils, and the panels of the ceiling are very beautifully decorated in gold and colours, with alternate quatrefoils of pale red and blue. The walls are ornamented with a neat design, and have besides an elaborate dado. On the cornice is the motto "Glory to God in the highest, and on earth peace, goodwill towards men." The designs for the decorations are the work of Messrs. T. D. Barry & Sons, of Liverpool, the architects of the church, and the work has been carried out by Mr. James Gregson, of Bolton.

### NEW BUILDINGS.

**Grangemouth.**—The memorial-stone of the new Town Hall has been laid. The principal front will have a frontage of 67 feet. The height from ground to top of parapet will be 40 feet 6 inches. The style adopted is Classic, after the Greek school. The ground storey will be built of polished ashlar, with horizontal channels. A moulded cornice, with dado over, will form the base of the upper storey. There will be a public entrance from the west side, which will give immediate access to the public office. The gallery, council chambers, and other two rooms will form the upper floor of the front portion of the building. The area of the hall will accommodate 550 and the gallery about 320—in all, 870. The small hall or upper room will seat upwards of 100 persons. The estimated cost is 4,600*l*. Mr. Black, of Falkirk, is the architect.

**Hawick.**—The memorial-stone of a cottage hospital has been laid. The hospital occupies a site in Buccleuch Street, and, when finished, will have accommodation for fourteen beds, besides having improved baths and all requisite hygienic arrangements. The funds for the erection of the building have been provided by public subscription and otherwise, considerable support being given by the late Duke of Buccleuch and the Scott Bequest Fund, the latter providing for an extensive dispensary. Mr. McLachlan, Edinburgh, is the architect.

**London.**—On Monday morning, Mr. Thomas Kellby, the Master of the Butchers' Company, formally laid the foundation-stone of the new hall of the guild in Bartholomew Close. The first Butchers' Guild was established in 1180, and their first charter was granted by James I. in 1606. Owing to fire and City improvements, the Butchers' Company has been tossed about from pillar to post, but now they have settled down on ground situated but a few yards from where their original home stood. The foundation-stone has the following inscription:—"This stone was laid upon the first day of September, 1884, by the Worshipful Master, Thomas Kellby, Esq.; Alexander Peebles, architect; B. E. Nightingale, builder; H. J. V. Philpott, clerk to the company."

### SCHOOL BUILDINGS.

**Glasgow.**—An addition has been made to the Thomson Street schools, chiefly with the object of providing accommodation for the teaching of science and art classes. The new premises consist of a wing two storeys in height, containing in the lower flat an infant schoolroom 67 feet by 32 feet, and in the upper a drawing-class room and laboratory measuring together 78 feet by 32 feet. Accommodation is provided for 507 pupils—247 infants and 260 senior students. The plans for the extension were prepared by Mr. Frank Burnet, architect.

**York.**—The foundation-stone of new Roman Catholic day schools in York has been laid. The interior of the building will be of the best workmanship. The floor of the schoolroom will be paved with blocks of pitch pine, and both rooms will have a dado of cream-coloured glazed bricks. There will be two approaches to the school, one for boys, and one for girls, and the boys and girls will have a separate playground. The cost will be rather more than 2,000*l*. Messrs. Goldie, Child & Goldie, of London, prepared the plans, and the contract is being carried out by Messrs. Biscomb & Sons, of York.

**Hucknall Torkard.**—A new block of Sunday-schools connected with the Baptist chapel has been opened. The schools have been erected and furnished at a cost of over 1,000*l*., the main cost of the structure having been borne by Mr. J. Nall, of Papplewick Grange, and Mr. J. Hinners, of Southport. The building has been designed by Messrs. Booker, of Nottingham, and is excellently adapted for the purposes of a Sunday-school. It comprises a large central room and a suite of six classrooms, all opening into and by means of large windows commanding a full view of the central hall. Mr. J. Munks, of Hucknall, is the contractor, and the work has been executed in simple Gothic style in harmony with the adjoining chapel, the walls being of brick with stone facings.

**Kelsall.**—A Wesleyan chapel and school has been opened. The buildings, which are in the Gothic style, are of stone, rock pitched face, with Eddisbury stone dressings. They consist of a chapel, two vestries, and two schoolrooms. The chapel is 53 feet by 32 feet, and contains a gallery on the south side which will seat about eighty persons, and which is reached by a flight of stairs at either end. There are five sets of principals of red deal with perforated trefoils and rings. The strength of the building is enhanced by five iron rods which run across. On either side of the pulpit there is a narrow stained glass window, and a window on the south side is of "cathedral tinted" glass. The principal entrance to the chapel is on the south side. Each of the two vestries, which are reached by a door on either side of the rostrum, is 18 feet square. The principal schoolroom is 35 feet by 18 feet, and the infants' room is 15 feet by 10 feet. The school and chapel have been so designed that, when occasion requires it, a partition is removed and the school becomes part of the chapel. The building is heated by apparatus supplied by Mr. Thomas Jones, of Manchester. Mr. John Wills, of Derby, is the architect, and the contractors are Messrs. G. & H. Wright and Isaac Johnson, all of Kelsall.

### GENERAL.

**Her Majesty** has conferred the distinction of a diploma upon the members of the Royal Institute of Painters in Water-Colours.

**Mr. C. Burton Barber** has been awarded the prize of 50*l*. and a gold medal offered by the committee of the Welsh National Eisteddfod, for the best picture in oil illustrative of an incident in Welsh history. The subject is *Gelert*, and the picture is now on view at the autumn exhibition in Liverpool.

**Mr. Boehm, R.A.**, is to receive the commission for the bronze statue of the late Mr. Bass, which is to be erected in Derby.

**Mr. J. E. Reid's** picture, *The Rival Grandfathers*, which was exhibited this year at the Grosvenor Gallery, has been purchased by the Liverpool Corporation.

**Mr. Alma Tadema, R.A.**, the president of the Royal Birmingham Society of Artists, arrived in Birmingham on Wednesday, and was present at the private view of the society's exhibition. Mr. Tadema is the guest of Mr. J. A. Chatwin, the vice-president of the Society of Artists.

**The British Association** will meet next year in Aberdeen.

**The Awards** of the juries of the Health Exhibition will not be announced until next month.

**Mr. H. Coghill**, Newcastle-under-Lyme, has intimated that if the proposed scheme of adopting the Free Libraries Act and erecting public baths in Newcastle is carried out in its entirety, he will give 1,000*l*. towards the cost.

**The Duke of Portland**, it is stated, has resolved to spend 10,000*l*. in the improvement of Troon harbour.

**Islington Old Churchyard** is to be converted into a public recreation ground, at an estimated cost of 1,100*l*.

**The Manchester City Council** have decided to rebuild the Corporation stables in Water Street at a cost of 7,200*l*.

**The City of Bristol** on Monday entered into possession of the Avonmouth and Portishead Dock undertakings, which have been purchased for 800,000*l*. They will be amalgamated with the Bristol Docks, already the property of the citizens. The purchase-money is to be paid in Corporation bonds bearing interest at 3½ per cent.

**M. Emile Trélat**, the French architect, read a paper at the International Sanitary Congress at the Hague, upon the ventilation of houses. He advocated the use of a bright open fire, with a plentiful supply of cold air taken direct from the outside of the buildings.

**The Provisional Committee** of the Manchester Ship Canal have met in Manchester to consider the alternative route of the canal to avoid the Mersey estuary. No definite conclusion was arrived at, the plans not being yet fully before the committee. Instructions were issued to the engineer to press forward the completion of the plans as quickly as possible.









DESIGN FOR ADMIRALTY & WAR OFFICES

BY MESSRS CLOVER & SALTER



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, SEPTEMBER 6, 1884.

### TENDERS, ETC.

*\*\* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.*

*\*\* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—"Contract Supplement to THE ARCHITECT."*

### COMPETITIONS OPEN.

**BIDEFORD.**—Sept. 22.—The Trustees of the Bideford Bridge Trust invite Competitive Designs for the Erection of a Block of Buildings suitable for a Post Office on site of Premises in High Street. Premiums of 20*l*. and 10*l*. The cost of carrying out any of the Designs not to exceed 300*l*.

**BOMBAY.**—Nov. 6.—The Municipal Commissioner of Bombay invites Designs and Estimates for a New Municipal Hall and Offices, which must be sent to his Office by Twelve noon, on Nov. 6. A Premium of 5,000 rs. will be given for the Design most approved of by the Commissioner, with the assistance of a Committee of the Corporation; 3,000 rs. for the second, and 2,000 rs. for the third. The total cost of the buildings is not to exceed 5 lacs (5,00,000 rs.). Mr. E. C. K. Ollivant, Municipal Commissioner's Office, Bombay, or at Messrs. E. W. & R. Oliver, 1 Corbet Court, Gracechurch Street, London.

**LONDON.**—Plans are invited for the Erection of School Buildings, Classrooms, Lavatories, and Outbuildings for 200 Boys. Mr. Geo. H. Hawley, Clerk to the Governors of the Endowed Schools, Longton.

**REDRUTH (CORNWALL).**—Sept. 13.—*School.*—The Redruth School Board offer a Premium of 25*l*. for the best Plans (Elevation and Detailed Drawings), to be selected by themselves, for a School, to be erected at Trewirgie, Redruth, to accommodate 700 Children (350 Boys and 350 Girls and Infants). Total cost not to exceed 3,500*l*. Mr. Charles Bowden, Clerk, Heanton Place, Redruth.

**STOCKPORT.**—Oct. 1.—Designs are invited for Public Baths. Premiums of £50, £30, and £20. Mr. Walter Hyde, Town Clerk, Stockport.

### CONTRACTS OPEN.

**BLACKBURN.**—For Building Church. Mr. W. S. Varley, Architect, 16 Richmond Terrace, Blackburn.

**BLACKROD.**—Sept. 8.—For Building Cemetery Chapel, &c. Mr. R. Knill Freeman, Architect, Bolton-le-Moors.

**BRADFORD.**—Sept. 9.—For Construction of Station. Plans at the Engineer's Office, Hunt's Bank, Manchester.

**BRECON.**—Sept. 6.—For Building House. Messrs. Browne & Gill, Architects, 1 Fountain Buildings, Bath.

**CAMBRIDGE.**—Sept. 11.—For Building Hospital. Mr. W. J. Bowyer, Town Surveyor, Guildhall, Cambridge.

**CARMARTHEN.**—Sept. 12.—For Building Schoolroom to Baptist Chapel. Mr. George Morgan, Architect, 24 King Street, Carmarthen.

**CLEGGAN.**—Sept. 24.—For Construction of Basin, Wharves, Groin, Extension of Pier, Deepening Harbour, &c. Mr. W. B. Soady, Secretary, Office of Public Works, Dublin.

**CYMMER.**—Sept. 11.—For Building Board Schools. Mr. Batchelor, Architect, Rotunda Buildings, Cardiff.

**DARLINGTON.**—Sept. 9.—For Re-seating St. Cuthbert's Church. Mr. Francis Parr, Architect, 6 Duke Street, Darlington.

**DEWSBURY.**—Sept. 15.—For Building Five Houses, Savile Town. Mr. H. Holtom, Architect, Bond Street, Dewsbury.

**DUBLIN.**—Sept. 10.—For Additions to Mercer's Hospital. Messrs. J. C. & H. C. Brett, Architects, 49 Dame Street, Dublin.

**GLASS.**—Sept. 13.—For Building Dwelling-house. Messrs. Matthews & Mackenzie, Architects, 255 Union Street, Aberdeen.

**GLYNCORRWG.**—Sept. 11.—For Building Board Schools. Mr. Batchelor, Architect, Rotunda Buildings, Cardiff.

**GORLESTON.**—Sept. 17.—For Building House and Shop. Mr. W. B. Cockrill, Architect, Glencoe House, Gorleston.

**GREENHEAD.**—Sept. 6.—For Building Methodist Church. Mr. Joseph Shields, Architect, Blackett's Buildings, Sunderland.

**HALIFAX.**—Sept. 6.—For Building House and Shop. Mr. Joseph Wilson, Architect, 222 Pellon Lane, Halifax.

**HALIFAX.**—Sept. 6.—For Building Engine-house and Chimney at the Albert Reservoir. Mr. Escott, Borough Surveyor, Town Hall, Halifax.

**HALIFAX.**—Sept. 8.—For Extension of Passenger Station. Plans at the Engineer's Office, Hunt's Bank, Manchester.

**HAMMERSMITH.**—Oct. 2.—For Rebuilding Superstructure and Strengthening Hammersmith Bridge, Construction of Temporary Bridge, &c. Sir J. W. Bazalgette, Spring Gardens, S.W.

**INVERURIE.**—Sept. 13.—For Erection of Buildings at Inverurie Mills. Messrs. Jenkins & Marr, Architects, 16 Bridge Street, Aberdeen.

**KEIGHLEY.**—Sept. 10.—For Pulling Down and Rebuilding Buildings in Longcroft. Mr. W. H. Hopkinson, Borough Engineer, Low Bridge, Keighley.

**KIDDERMINSTER.**—For Building Offices and Warehouses. Mr. J. M. Gething, Architect, 7 Church Street, Kidderminster.

**KNOCKADOON.**—Sept. 17.—For Construction of Boat Slip and Platform, Rock Excavation, &c. Office of Public Works, Dublin.

**LEICESTER.**—Sept. 11.—For Building Shops and Offices. Mr. E. Lidiard James, Architect, 119 Cheap-side, E.C.

**LIMERICK.**—Sept. 22.—For Building the St. Vincent of Paul National School. Messrs. Nash & Son, Land Agents, 85 George Street, Limerick.

**NEWCASTLE-ON-TYNE.**—Sept. 6.—For Building Detached Residence. Messrs. Newcombe & Knowles, Architects, 89 Pilgrim Street, Newcastle.

**NEWCASTLE-ON-TYNE.**—Sept. 30.—For Clearing Site and Building Offices for the Tyne Improvement Commissioners. Mr. J. J. Stevenson, 18 Queen's Road, Bayswater, W.

**PERTH.**—Sept. 26.—For Enlargement of the General Station. Messrs. Blyth & Cunningham, C.E., 135 George Street, Edinburgh.

**PEWSEY.**—For Erection of Farm Buildings, Cottages, and Stables and Additions to Farmhouse. Mr. J. C. Rose, Sunny Hill, Pewsey.

**SHIPTON-UNDER-WYCHWOOD.**—Sept. 6.—For Building Beaconsfield Hall. Mr. T. Brookes, Shipton, Chipping Norton.

**ST. BUDEAUX.**—For Enlargement of Schools. Mr. A. Norman, Architect, 3 Buckland Terrace, Plymouth.

**STOCKTON.**—For Building House. Mr. John Rodham, Surveyor, 16 Finkle Street, Stockton.

**STRATFORD.**—Sept. 23.—For Building Police Court and Offices. Mr. Lewis Angell, C.E., Town Hall, Stratford, E.

**STROUD.**—Sept. 20.—For Building Post-Office. H.M. Office of Works, 12 Whitehall Place, S.W.

## MANUFACTURERS AND IMPORTERS OF MARBLE AND WOOD CHIMNEY PIECES.

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SWANSEA.—Sept. 16.—For Additions to Tirdewnew School. Mr. E. Sidney Hartland, Clerk to the School Board, 5 Rutland Street, Swansea.

TODMORDEN.—Sept. 26.—For Construction of Reservoir, Ramsden Clough. Mr. James Farrar, C.E., Market Street, Bury.

TREHARRIS.—Sept. 6.—For Building Police Station. Mr. T. Mansel Franken, Clerk of the Peace, Cardiff.

WATH-ON-DEARNE.—Sept. 9.—For Building Dwelling-houses. Mr. H. L. Tacon, Architect, 11 Westgate, Rotherham.

## TENDERS.

### ASHTON-UNDER-LYNE.

For Excavations and Foundations for Weaving-shed for the Carrs Manufacturing Company, Ashton-under-Lyne. Messrs. J. EATON & SONS, Architects. HOLMES & WEBSTER (accepted).

### BATLEY.

For a Warehouse in Tichborne Street, Staincliffe, for Messrs. Richard Turner & Sons, Rag Merchants. Mr. J. T. LAW, Architect, 64 Commercial Street, Batley.

Masons.		
Whitehead, Dewsbury	£210	0 0
Firth, Heckmondwike	208	0 0
Goddall, Batley	195	0 0
Chadwick & Sons, Staincliffe	190	0 0
North, Batley	185	0 0
Baines, Batley	178	0 0
Wainwright, Earlsheaton	169	19 6
Hepworth, Batley	167	0 0
Crabtree, Batley	167	0 0
Stainer, Heckmondwike	160	0 0
Goldthorpe, Batley	160	0 0
Robinson, Batley	160	0 0
FIRTH, Staincliffe (accepted)	152	6 0
Barber, White Lee, Heckmondwike	142	0 0

Joiners.		
Brown, Gomersal	130	0 0
Mann, Heckmondwike	128	0 0
Chadwick & Sons, Staincliffe	123	0 0
Lyles & Smith, Batley-Carr	122	0 0
Fothergill & Schofield, Batley-Carr	116	10 0
W. & T. Milnes, Heckmondwike	111	0 0
North, Batley	109	0 0
Armitage & Son, Dewsbury	109	0 0
Garthwaite & Blackburn, Dewsbury	105	0 0
Brooke & Sons, Ossett	100	0 0
Fozard, Batley	98	10 0
ILLINGWORTH, Batley (accepted)	88	13 0
Richardson & Son, Staincliffe	87	0 0

Slaters.		
Thompson, Dewsbury	42	10 0
Rhodes, Birstall	39	0 0
Pickles Bros., Leeds	38	10 0
Brear, Dewsbury	37	10 0
Fawcett, Dewsbury	37	0 0
THORNTON, Batley (accepted)	36	10 0

Plumbers and Glaziers.		
Armitage, Birstall	20	16 0
Saxton, Batley	17	13 6
Senior, Batley	17	7 0
Coates & Son, Dewsbury	17	1 5
Firth, Birstall	16	19 6
Waller, Batley-Carr	16	10 0
Lister, Birstall	15	15 0
Jessop, Batley	15	7 0
Brooke, Heckmondwike	13	17 0
WALSHAW, Batley (accepted)	13	16 0
Walker, Heckmondwike	13	5 0

### BIRKENHEAD.

For Sewering, Making, and Completing Wellesley Street. Birkenhead, between Old Bidston Road and Beckwith Street.

RIDDEL (accepted) . . . . . £358 9 1

### BIRMINGHAM.

For Construction of Erdington Tramways, Birmingham. BIGGS (accepted), schedule.

### BYFLEET.

For Building three Cottages, Byfleet. Mr. C. WELCH, Architect, Chertsey.		
Reed, Wimbledon	£497	0 0
Christmas, Ripley	440	0 0
Newland, Cobham	400	0 0
A. & H. Brown, Addlestone	390	0 0
Watkins, Wisley	375	0 0
Reavell, Staines	375	0 0
Trim, Horsham	349	0 0
Curgenven, Addlestone	338	0 0
Pooley, Byfleet	320	0 0

### CARDIFF.

For Additions to Exmouth Villa, Newport Road, Cardiff. Mr. W. F. GILBERT, Architect, Cardiff.

Shipton & Son	£1,463	0 0
Cocks	1,193	0 0
Lock	1,114	0 0
PRICE (accepted)	1,110	0 0
Architect's estimate	1,111	17 5

For Painting Wood and Iron Work at Abbatoirs and Cattle Market at Roath and Canton, Cardiff.

Gillard Bros.	£580	0 0
Lewis	344	0 0
Davis & Son	248	0 0
CADOGAN (accepted)	173	0 0

### EAST LISS.

For Coachman's House to Havelock House, East Liss, Hants, for Mr. George Wright. Mr. MARK H. JUDGE, A.R.I.B.A., Architect, 8 Park Place Villas, Paddington, W.

JENKINS (accepted).

### DARENTH.

For Enlargement of Gasworks in connection with the Asylums for Imbeciles for the Managers of the Metropolitan Asylum District. Messrs. A. & C. HANSTON, Architects, 15 Leadenhall Street, E.C. Quantities not supplied.

Cutler & Son, Millwall	£6,685	0 0
Bower, St. Neots	5,541	0 0
Porter & Co., Lincoln	5,507	10 0
Holmes & Co., Huddersfield	5,200	0 0
WILLEY & Co., Exeter (accepted)	5,014	0 0

### GLOUCESTER.

For Alterations and Additions to the Gloucester Infirmary and Eye Institution. Mr. F. W. WALLER, Architect. CLUTTERBUCK (accepted) . . . . . £3,550 0 0

For Laying Pipe Sewer (1,172 yards), and Constructing 9-inch Brick Culvert (940 yards), with Manholes, &c., for the Southend Drainage, Gloucester. Mr. R. E. READ, Surveyor.

Osborne, Bristol	£3,125	11 1
Mereditth, Gloucester	2,941	9 0
Williams, Swans	2,727	10 11
Cowdery & Sons, Newent	2,443	8 11
BEARD, Gloucester (accepted)	2,205	9 11
Hilton & Sons, Birmingham	2,045	0 0
Surveyor's estimate	2,458	0 0

### HASTINGS.

For Erection of a Rectory House, Silverhill, Hastings, for the Rev. F. E. Newton. Mr. ARTHUR A. G. COLPOYS, A.R.I.B.A., Architect, 33 Havelock Road, Hastings. Quantities by Messrs. Wm. Cooper & A. W. Cross.

Shillitoe, Croydon	£3,200	0 0
Shortell, St. Leonards	3,000	0 0
Saller, St. Leonards	2,975	0 0
Eldridge & Crutenden, St. Leonards	2,840	0 0
Jenkins, St. Leonards	2,600	0 0
HUGHES, St. Leonards	2,600	0 0

\* Accepted subject to a deduction in the bill of quantities.

For Alterations and Additions to 33 Havelock Road, Hastings, for Mr. A. L. Sayer. Mr. A. A. G. COLPOYS, A.R.I.B.A., Architect, 33 Havelock Road, Hastings. Quantities supplied.

Coussens	£270	0 0
BURDEN & GARNER (accepted)	259	0 0

### HOLME CULTRAM.

For Repairing the Abbey Church, Holme Cultram. Mr. J. A. CORY, Architect, Carlisle.

Pearson, Wigton	£432	7 6
Smithson, Treby	245	0 0
Foster, Wigton	203	0 0

### LINCOLN.

For Works in Extension of West Parade, from Orchard Street to Hungate, Lincoln. Quantities by Mr. R. A. MACBRAIN, C.E.

Corrected List.		
J. & T. Binns, Lincoln	£1,076	18 9
H. S. & W. Close, Lincoln	1,044	19 4
Hampshire, Lincoln	997	0 0
Bradley, Lincoln	953	7 10
COPELY, Lincoln	931	9 2
Roberts, Bradford	931	6 7
Engineer's Estimate	963	0 0

\* Accepted as the schedule of prices attached was lower than that of B. Roberts.

### LITTLE CHART.

For Erection of New House at Little Chart, Kent, for Mr. J. D. Blount. Mr. W. RAVENSCROFT, Architect, Reading.

Hughes, Ashford	£935	0 0
Baker, Ashford	925	0 0
Barden, Maidstone	879	0 0
Vaughan, Maidstone	719	0 0
STEDDY, JOY & STEDDY, Ashford	710	0 0

\* Accepted subject to a few modifications.

### LIVERPOOL.

For Painting and Repairing St. Martin's Cottages, Liverpool. THOMAS (accepted) . . . . . £140 0 0

For Painting Treasurer's Offices and Committee Room in Municipal Offices, Liverpool.

GOWANS & OGILVIE (accepted)	£86	16 0
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### LONDON.

For Erection of New Premises in the Kentish Town Road for Mr. Charles Wilson. Mr. H. H. BRIDGMAN, F.R.I.B.A., Architect. Quantities by Mr. F. Thomson.

If Portland Stone.		
Drew	£6,200	0 0
Lawrence & Sons	5,619	0 0
Richardson Bros.	5,598	0 0
Manley	5,547	0 0
Nightingale	5,454	0 0
Dove Bros.	5,390	0 0
Hunt	5,356	0 0
Lamble	5,294	0 0
Wall Bros.	5,290	0 0
Scrivener & Co.	5,263	0 0
Shurmur	5,247	0 0
Gould & Brand	5,200	0 0
Toms	5,119	0 0

If Beer Stone.		
Drew	6,150	0 0
Lawrence & Sons	5,593	0 0
Richardson Bros.	5,538	0 0
Manley	5,521	0 0
Nightingale	5,424	0 0
Hunt	5,336	0 0
Dove Bros.	5,325	0 0
Lamble	5,254	0 0
Wall Bros.	5,235	0 0
Scrivener & Co.	5,203	0 0
Shurmur	5,210	0 0
Gould & Brand	5,150	0 0
TOMS*	5,059	0 0

\* Accepted, with an addition of £575 for Party Wall, Fittings, &c., making a total of £5,634.

### LONDON—continued.

For Shops and Mineral Water Factory, Bethnal Green, for Mr. James Cox. Messrs. WHITMORE & REEVES, Architects and Surveyors, 14 Devonshire Square, Bishopsgate, E.C.

		Old materials.
Conder	£5,359	0 0
Langmead & Way.	5,100	0 0
F. & F. J. Wood	5,047	0 0
Jarvis & Sons	5,046	0 0
Higgs	4,936	0 0
Beale	4,898	0 0
Nightingale	4,690	0 0
Forrest	4,585	0 0
Walker	4,533	0 0
Steel Bros.	4,277	0 0
Wyman	4,233	0 0
Wyman, reduced	4,105	0 0
STEEL BROS., reduced (accepted)	4,050	0 0
Architects' estimate	4,300	0 0

### LOW SEATON.

For Building Good Templars' Hall, Low Seaton. Mr. G. D. OLIVER, Architect.

Accepted Tenders.		
Mann, builder	£270	0 0
Bragg, joiner	195	0 0
Whitfield, slater	47	0 0
Waller, plasterer	63	0 0
Walker, plumber	14	10 0
Keenlside, painter	31	10 0

All of Workington.

### MENAI BRIDGE.

For Extension of Outfall Sewer at Garth.

E. Williams	£1,456	0 0
Mathews	1,400	0 0
ROBERTS (accepted)	1,395	0 0
J. Williams	1,356	0 0

### MIRFIELD.

For Sewerage Scheme Works (Contract No. 5), Mirfield. Mr. F. H. HARE, Engineer.

Brier, Son & Wilson, Dewsbury	£1,047	0 0
Glyeart, Leeds	1,030	7 5
Green, Rotherham	930	0 10
Coates & Son, Dewsbury	927	0 0
G. & R. Naylor, Cleckheaton	857	0 0
Egan & Kaye, Bradford	845	14 8
Jones, Bolton	786	9 6
Dovenor, Sowerby Bridge	775	11 8
Ross, Leeds	771	16 7
Marvell & Parker, Leeds	732	15 10
Tempest, Keighley	699	5 0
Slinger, Cleckheaton	696	0 0
Firth, Dewsbury	695	12 2
Hinchcliffe & Small	688	8 0
G. & H. Tyson, Halifax	688	7 3
GARFORTH BROS., Mirfield (accepted)	603	17 5

### NEWPORT.

For New Schools and Master's House at Crumlin, Newport. Mon. Mr. E. A. LANSDOWNE, Architect. Quantities supplied.

Linton, Newport	£2,499	0 0
Jones & Son, Newport	2,287	0 0
Williams, Newbridge	2,280	0 0
PARFITT (accepted) Pontnewydd	2,075	0 0
Burgoine, Blaenavon	2,040	0 0

For New Stables and Coach-house at York Place, Newport. Mon. for Mr. H. A. Huzzey. Mr. E. A. LANSDOWNE, Architect. Quantities supplied.

Force, Bristol	£350	0 0
Jones & Son, Newport	290	0 0
Blackburn, Newport	280	0 0
Moulton & Bromscombe, Newport	275	0 0

### PORTSEA.

For Constructing a Jetty, with Landing Stairs and Slipway, and Dredging the Foreshore and other Works in Connection at Flathouse, Portsea, for the Corporation of the Borough of Portsmouth. Mr. H. PRACY BOULNOIS, M.I.C.E., Borough Engineer. Quantities supplied by Mr. H. P. Foster, 5 John Street, Adelphi, London.

Lucas & Son, Kensington	£45,067	0 0
Mackay, Hereford	40,180	15 9
Hayter, Stainshaw	34,470	0 0
Light & Co., Landport	32,000	0 0
Mowlem & Co., Westminster	30,800	0 0
Hall, Buckland	29,926	9 0
Bevis, Kingston Crescent	26,731	4 6

### PRESTON.

For Construction of Dock of 40 acres area and Tidal Basin 4½ acres, in connection with the Ribble Navigation Works, Preston. Mr. GARLICK, Engineer.

WALKER, London (accepted)	£439,359	9 11
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Nineteen tenders were received.

For Deepening Diversion of River. WALKER (accepted) . . . . . £17,000 0 0

### ST. ANDREWS.

For Construction of Reservoir, Filters, &c, Lochty Place, Carnbee, St. Andrews, and for about five miles of 10-inch cast-iron Pipes. Mr. A. C. BOOTHBY, Engineer.

Brebnor, Edinburgh	£10,910	0 0
M'Kenzie, Kirkcaldy	10,798	0 0
Worth & Strachan, East Wemyss	10,661	0 0
J. & W. Torrance, Kirkcaldy	10,582	0 0
Thorburn, Edinburgh	10,558	0 0
MACKAY & SON, Broughty Ferry (accepted)	10,430	0 0
Pollock-Partick	10,233	0 0
Wann, Dundee	10,181	0 0
Chalmers & Crawford, Burntisland	9,988	0 0

### SOUTHAMPTON.

For Enlarging Cemetery, Southampton. Mr. W. B. G. BENNETT, Borough Surveyor.

Hull, Sons & Co.	£2,659	0 0
CROOK (accepted)	2,237	10 0
Surveyor's estimate	2,489	0 0



**SOUTHAMPTON.**

For Rebuilding No. 125 High Street, Southampton, for Mr. John H. Cooksey. Mr. W. H. MITCHELL, Architect, Southampton.

Nichols . . . . .	£3,235 0 0
Stevens & Sons . . . . .	3,124 0 0
Sanders . . . . .	3,117 0 0
BULL, SONS & Co. (Limited) (accepted) . . . . .	2,929 0 0

**SCUNTHORPE.**

For Building Cemetery Chapel and Mortuary Lodge, Entrance Gates and Palisading at new Cemetery, Scunthorpe, Lincoln. Mr. R. CLAMP, Architect, Hull. Quantities by the Architect.

Skinner, Scunthorpe . . . . .	£1,082 15 0
Holt, Scunthorpe . . . . .	960 0 10
Haywood, Grimsby . . . . .	929 0 0
Green, Rotherham . . . . .	910 15 0
Usher & King, Barton-on-Humber . . . . .	887 0 0
Dent, Brigg . . . . .	880 0 0
Kendall, Market Rasen . . . . .	824 18 0
LUMLEY, Winterton (accepted) . . . . .	810 17 6

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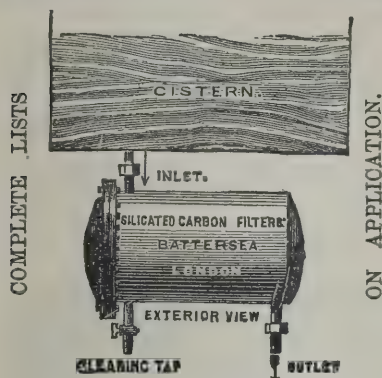
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Full particulars post free. SAMUEL PUTNEY, Baltic Wharf, Harrow Road, Paddington, London, W. 12 Elm Street, Gray's Inn Road, W.C.

**STOWER.**

For Erection of High Bridge, Stower, Dorset. Mr. WALTER J. FLETCHER, County Surveyor, Dorset.

Carey Bros., Yeovil . . . . .	£1,735 0 0
Bacon, Poole . . . . .	1,598 0 0
Jesty, Weymouth . . . . .	1,586 0 0
Sanders, Southampton . . . . .	1,524 0 0
Pickthall, Bridgwater . . . . .	1,454 0 0
Whettam, Weymouth . . . . .	1,345 0 0

**TRURO.**

For Building Two Cottages, Truro. Mr. A. H. CLEMENS, Architect.

WELSH (accepted).

**VENTNOR.**

For Construction of Drains, Shafts, and Sewage Tank, &c., for the Board of Management of the Royal National Consumption Hospital, Ventnor, Isle of Wight. Mr. WILLIAM GREENHILL, Engineer, 8 St. James's Road, Surbiton. Quantities supplied by Mr. H. P. Foster, 5 John Street, Adelphi, London. INGRAM & SONS (accepted) . . . . . £1,354 0 0

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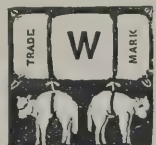
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**GRUNDY'S PATENT  
WARM-AIR  
VENTILATING FIRE GRATE.**

The novelty, superiority, and advantage of this patent consist in the heating surface being greater than any other Fire-grate introduced to the public. It is very simple in construction, and is made in the form of a Stove, the back of which is semicircular in shape, with gills behind and smoke-nozzle on top, all cast in one piece. The same can be attached to any design of a Register or Stove front. It is very suitable for schools, class-rooms, waiting-rooms, hospitals, offices, dormitories, and dwelling-houses, from the cottage to the mansion. Design and specification post free on application.

**TESTIMONIALS.**

"9 Victoria Chambers, Westminster, S.W.

"June 10, 1884.

"SIR,—I have much pleasure in testifying to the efficiency of your patent Warm-Air Fire Grate. It has been very successful, and given every satisfaction where I have used it.

"Yours, &c.

"JAMES WEIR, F.R.I.B.A.

"To Mr. Grundy."

"Baptist Chapel, Clapham Common, London. Richard Webb, Pastor, 10 Grafton Square.

"February 15, 1884.

"DEAR MR. GRUNDY,—I have pleasure in testifying to the excellency and efficiency of your patent Fire-Grate. It is the most charming invention for heating a large room I have ever known. I shall have pleasure in showing it to anyone who wish to have their schools or rooms pleasantly and efficiently heated."

From James Garry, Esq., Architect, West Hartlepool, July 1884.

"DEAR SIR,—I have very great pleasure in stating that the first stove, or patent warm-air ventilating fire grate, adopted by me in school at Seaton, and a second in a Cocoa Palace, have given such satisfaction that I now order eleven to be inserted in New Upper Grade Schools in course of erection at West Hartlepool. They are the most economical, efficient, and easily managed stove at present before the public.

"Mr. John Grundy."

Apply to JOHN GRUNDY, 30 Duncan Terrace, City Road, London.

Works—TYLDESLEY, near MANCHESTER.

**WALSALL.**

For Erection of Sewage Farm Buildings, Brockhurst Farm, Walsall.

LYNEX (accepted) . . . . . £2,989 0 0

**WELLINGBOROUGH.**

For Building Small Culvers, Hobill's Mill, Wellingborough. Mr. E. SHARMAN, Surveyor, Wellingborough.

Brown . . . . .	£35 0 0
Underwood . . . . .	33 10 0
Herson . . . . .	31 10 0
Marriott . . . . .	27 10 0
HARRISON (accepted) . . . . .	24 12 6

**WIMBLEDON.**

For Erection at the Sewage Works of Press House, Coke Shed, and a Complete Plant of Messrs. Johnson & Co.'s Manufacture, for the Treatment of Sewage Sludge, &c., for the Wimbledon Local Board. COOKE & Co., Battersea (accepted) . . . . . £1,570 0 0

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## BELL'S ASBESTOS FLOORING FELT.

This article is manufactured from specially prepared Asbestos fibre, and by its use any building can be rendered comparatively fireproof at a very small cost. This material should be used as a substitute for brown paper under the carpet, and it can be taken up and relaid as often as required; it may be laid between the flooring boards, on the ceiling before plastering, and on the walls. Doors of pine or other wood should be so constructed as to have a sheet of the felt in the centre, so that either side being burned the other remains intact. In houses so protected fires would be localised to the rooms in which they originate. Asbestos felt, being a non-conductor of heat, is superior to any other sheathing, and used under slates has no equal. It yields no dust, lies quite flat, is soft to the tread, and its low cost places it within the reach of everybody. Made in rolls of 36 inches wide.

**BELL'S ASBESTOS BOILER AND PIPE COVERING COMPOSITION** for coating every class of steam pipe and boiler. Non-combustible, and easily applied when steam is up; adheres to metals and preserves them from rust; prevents the unequal expansion and contraction of boilers exposed to weather; covers 50 per cent. more surface than any other coating, and is absolutely indestructible. It can be stripped off after many years' use, mixed up again with 20 per cent. of fresh, and applied again. The composition is supplied dry, and only requires to be mixed with water to the consistency required for use.

A horizontal boiler, 17 ft. 6 in. long, 15 H.P., gave the following results:—

Temperature on Plates .. .. .	186 deg.
"          "          Covering .. .. .	94 "

One ton of coal was saved per week, and, although the fire was raked out every evening 20 lbs. of steam were in the boiler next morning.

The following testimonial refers to this covering:—

Dear Sir.—It may interest you to know that we save exactly 40 per cent. in fuel through using your covering.—Yours truly,  
W. SANTO CRIMP, C.E., F.G.S.

**BELL'S ASBESTOS PAINT**, for floors, stairs, and all interior woodwork, to prevent the spread of fire. This paint is especially useful in cotton mills, and in fact in all factories and buildings exposed to risk from fire. It is quite free from poisonous ingredients, and is both easily and cheaply applied. Bell's Asbestos Paint has, on several occasions, done great service in preventing the loss of life and property. The great fire in Buchanan Street, Glasgow, in November last, produced the following testimony to the value of this material:—

Offices of the *Glasgow Herald*, the *Weekly Herald*, and the *Evening Times*.

Mr. John Bell.  
Sir,—As one of the means that helped to save our buildings extending from Buchanan Street to Mitchell Street from the recent great fire, I think it fair to say that your Asbestos Paint, which was applied to the outside hoist of the *Evening Times* case-room and other portions, gave valuable proof that it materially aided in resisting the flames from the immediately adjoining tenement while the fire was rapidly destroying it and threatening us in the most serious form. Since the fire, and to assure myself further of the value of the Asbestos Paint as a fire-resister, I placed a piece of wood, with your paint put on more correctly than in our case, into one of our furnaces, with the result that it was brought out without a fibre of the wood being touched, while similar pieces of wood, thrice coated with Irish Lime, at once got into a flame.—Yours truly,  
(Signed) ALEX. SINCLAIR.

**BELL'S ASBESTOS SASH-LINE CORD** is unaffected by heat and damp, and renders unnecessary the use of metallic wire and chains. Ropes made in the same form have great tensile strength, and being indestructible by fire are of incalculable value for fire escapes.



## BELL'S ASBESTOS.

The goods of this house are of the highest quality only, and no attempt is made to compete with other Manufacturers by the supply of inferior materials at low prices. All orders must be sent direct to the undermentioned depôts, and not through agents or factors.

**BELL'S ASBESTOS AND INDIA-RUBBER WOVEN TAPE AND SHEETING** for making every class of steam and water joint. It can be bent by hand to the form required, without puckering, and is especially useful in making joints of manhole and mudhole doors on boilers; also for large "still" joints, where boiling fat and steam have to be resisted. It is kept in stock in rolls of 100 feet, from  $\frac{1}{4}$ -in. to 3-in. wide, and any thickness from  $\frac{1}{8}$  in. upwards. Manhole covers can be lifted many times before the renewal of the jointing material is necessary. The same material is made up into sheets about 40 in. square, and each sheet bears the trade mark, without which none is genuine. It is very necessary to guard against imitations of this useful material, and to secure themselves against being supplied with these less useful articles at my price, users are recommended to see that every 10-ft. length of the Asbestos Tape purchased by them bears the trade mark.

**BELL'S ASBESTOS CEMENT** for the backing of firebricks and furnaces. The use of this fireproof material saves the expense and annoyance occasioned by the repairs so constantly required in the firebricks and kitchen ranges of private houses. Any labourer accustomed to handle other cements can apply this.

**BELL'S ASBESTOS BOILER PRESERVATIVE**.—This useful mixture, by absorbing the free oxygen that is in the water, entirely checks pitting and corrosion. It also disintegrates incrustation so immediately as to prevent its adhering to the plates. Not only is a great economy of fuel effected by keeping boilers clean, but the risk of having the plates burned is thereby obviated. It has been computed that 1-16th inch thick of incrustation causes a waste of 15 per cent. of coal;  $\frac{1}{4}$  inch thick, 60 per cent.; and  $\frac{1}{2}$  inch, 150 per cent. Thus the Preservative avoids the great risks which are inseparable from scaled plates, lengthens the life of a boiler, and covers its own cost a hundredfold by economy of fuel. It is entirely harmless, and has no injurious action on metals. It can be put into the feed tank or boiler, as may be most convenient. Sold in drums and casks bearing the trade mark, without which none is genuine.

**BELL'S PURE ASBESTOS CLOTH**, for protection against the spread of fire. Iron curtains warp, and in the great emergency of fire will often be immovable. Asbestos cloth, being incorruptible, will remain strong and flexible for an indefinite period, and will stay the progress of a fire and the passage of smoke longer than any other known material. This cloth is also extensively used in Maignen's unequalled water filters, for which a gold medal and diploma of honour were awarded by the Special Commission appointed by Her Majesty's Government to receive the reports of the International Juries at the Fisheries Exhibition. By special arrangement with Mr. Maignen, his filters for houses, factories, and towns are supplied by this firm.

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# The Architect.

## A CHAPTER OF PRACTICAL CRITICISM: THE WAR OFFICE AND ADMIRALTY.



OW that the selected design for the new War Office and Admiralty is well known to the architectural profession, and that the position won by its authors may be assumed to be secure, we may appropriately undertake to submit to our readers a few more observations upon the salient points of its artistic composition, as a study in criticism. We take, of course, the published view towards St. James's Park; and we will ask leave to refer also to one of the other designs, that of Messrs. STARK & LINDSAY (in our last week's issue), for the sake of illustrating some of our remarks by means of comparison.

Messrs. LEEMING's primary motive of composition, as regards this aspect of their building, may be thus described. One great comprehensive mass occupies the whole site in front of the line of Spring Gardens and the Horse Guards; from which a wing is thrown out to cover the extra space at the south-east corner. Messrs. STARK & LINDSAY's primary motive is virtually the same.

Upon this basis Messrs. LEEMING mark the angles of their principal mass by three campanili; there are necessarily four angles, and one of them, like *Punch's* "one poor tiger that hadn't got a Christian," has not got a campanile. Now, if there be any reason for this, the designers are quite entitled to argue for its sufficiency; but if it be only an oversight, then criticism may run thus. The campanili are lofty; even from the somewhat close point of view from which the perspective drawing is made the third shows its summit distinctly, and the further the spectator goes across the park—and he can go a very long way—the more must this feature come into view, and the absence of its fellow provoke inquiry. Whether it is enough to point to the symmetrical disposition of the façade of the wing, in pursuance of which the inner corner in question is marked by a different feature of the same sort, a reflection of the lantern which emphasises the outer corner, we leave the reader to consider; but we may perhaps be allowed to ask why the middle of the length of this wing should have the domed pavilion introduced at all, and whether it is not the southward wall over the Horse Guards, if any, that ought to be made symmetrical, as the end "front" of a mass of which the return front is but a flank?

In this respect Messrs. STARK & LINDSAY treat the case differently. They mark by campanili, or towers, only the two front angles of the great mass, and there is no third to suggest the want of a fourth. The treatment of the flank of the wing, also, has a certain advantage, in being apparently, although not really, a lower building. But here again let the reader consider whether the symmetrical composition of this flank wall as an independent façade is not objectionable. In fact the treatment of a large building on the plan of making each wall a principal front is surely productive of confusion in the mass; and we may go so far, if only experimentally, as to inquire whether the introduction into their return front by Messrs. STARK & LINDSAY of almost an exact reflection of the central mass of their principal façade is, we will not say necessary, or even desirable, but, on true critical grounds, admissible? For one thing, does not such treatment at once suggest the third and fourth campanili?

Let anyone should suppose that we are following the vulgar rule of regarding criticism as mere fault-finding, let us here interpose our most cordial congratulations to Messrs. LEEMING upon their success artistically as well as otherwise; and let us say further that, in spite of all that has been complained of, we regard a full majority of the nine competitors to have acquitted themselves most honourably.

The next point to which we shall direct attention is the composition of the two chief façades, on the flat rather than in the solid. Messrs. LEEMING start with what we suppose no one will deny to be a graceful and well-proportioned "order," comprising basement, colonnade, and attic. Now if we may

be permitted to put ourselves in the place of the designers, we will venture to submit that the idea which first occurred to their minds was the display of an unbroken colonnade from campanile to campanile. But, such is the hold that a corrupt idea of the picturesque has taken upon English architectural taste, that they would be justified in concluding that such simplicity would be regarded as meagreness; and, in a word, what has been done, in order to "break up" the façade, is to convert it into a make-believe centre and wings by the expedient of forming two very original, perhaps, but perfectly unnecessary (as regards plan), and surely palpably spurious features, in which a pair of wall-turrets, with no possible object except display or dress, are supported behind by the pretence of a pavilion roof with no other object either. Not only so, but this gratuitous arrangement is reproduced on the flank wall. One special reason that may be assigned for all this is sky-line; but the difference between true and false sky-line could scarcely be better exemplified than in the contrast of this composition with Messrs. STARK & LINDSAY's. If such a master as the late Sir CHARLES BARRY had had the handling of this, we venture to say he would have discarded these pavilions of Messrs. LEEMING's, clever as they may be in their way, without a moment's hesitation; and if sky-line be in request, we frankly ask Messrs. LEEMING to consider whether it may not be obtained in a better and indeed easier way.

The graceful proportions of the "order" induce us to suggest that it is matter for regret that the entablatures should be so remorselessly broken as they are throughout. The reason for this is no doubt to be found in the same unhappy devotion to the picturesque at all hazards which has been already spoken of, and which, as a principle of artistic design, is simply ruinous to Classic architecture on a grand scale. A tyro can see at a glance that the effect of these broken entablatures is to produce a mere row of buttresses. Would it not be much better, especially if the pavilions were abandoned, to make one grand range of colonnade, basement, and attic, in the simple simplicity of the original Classic purpose of such features? It is only on paper that a broken entablature accomplishes its purpose; and a bad purpose it is at the best.

Are Messrs. LEEMING really serious in the design of their campanili? Originality is all very well, as precedent is all very well; but if their good taste can stomach, *inter alia*, the paltry French gablets which occupy the attic stage at the angles, how can they justify the pair of pilasters in the middle of the next stage, and the development above into a single narrow pier, to the end that the lantern and roof may, for a change, be turned round forty-five degrees from the square? Is this a Classic motive? Granted that paper piquancy may have been served by this unique mode of composition, may we not hope, now that the question is one of actual building, that all such whimsies will be reconsidered? No one, we venture to think, can say that we are here displaying anything like ungraciousness towards the clever new-comers who have taken the lead in this competition; we must beg of them to take our remarks as mere academical criticism, for the benefit, we do not presume to say of themselves, but of such of our readers as will take the trouble to follow them, and to whose individual judgment we submit them as a lesson, for what it is worth.

Another question worth raising for consideration is this:—Why so many peaks? The spurious piquancy of the hour, we submit again, and not Classical repose; a paper purpose again, and not a true structural effect. Surely it is good criticism to say that the fewer of these empty sky-line pinacles there are, the more classically chaste the *ensemble* will be. One of the most effective dogmas in architectural design of whatever sort is this—that everything should be occupied, and honestly occupied. A mediæval corner turret, for instance, say on the angle of a church tower, contains a stair, and even its rooflet, if carried up beyond, need not be empty and inaccessible. The tourelles of a grim old Scottish castle-keep were little chambers of utility, either for the lord's bowman or the lady's tiring-maid. To take an extreme instance, Messrs. LEEMING's lofty tower at the corner of the Horse Guards—although what æsthetic purpose it serves may be fairly made a question—need not at any rate be vacant, even in its uttermost height, so long as a fair lady can be asked to ascend within and gratify her curiosity by a bird's-eye view of the park and the river. Now what have Messrs. LEEMING got in the lantern stage of their corner campanili? Suppose the late Sir CHARLES BARRY were again advising them, and suppose he swept away,



as we have suggested, the pairs of empty little square face-turrets that are so picturesque on paper, let us ask plainly whether he would leave the lanterns of the campanili. Would not the effect of repose be all the better without them? What he would do, again, with the whole minaret in Whitehall we will only mention as another question to be asked.

Turning to Messrs. STARK & LINDSAY's design, we would ask in like manner whether the effect would not be improved by omitting the upper stage—very well designed as it is—of the corner towers?

The two designs before us may suggest, lastly, a consideration of the difficult critical question whether to prefer an order for each storey, with its comparative feebleness of effect, or an order of two storeys with its unquestionably greater resources in the direction of majesty and simplicity. It is a good primary principle, by the way, that every floor-level inside should be marked by a cornice or string-line outside. Thus, when a figure is seen at a window, the eye ought to see its base line in the architecture; and whenever, on the contrary, a cornice line is seen to cut off half the leg or to put the figure on stilts, the rule of the fitness of things seems to be violated.

Minor points we do not profess to touch upon, but if we have succeeded in leading the reader to think for himself upon a few general questions, we have fulfilled our promise. We hope to see Messrs. LEEMING improve their design in execution, so as to make it a great and noble work. If they wish to see an example of what may be done in this way, we recommend a comparison of the original design for the Houses of Parliament with the very much altered version of it which the genius of Sir CHARLES BARRY developed in execution.

One last word in a general sense. Remember the cynical advice given to young writers—to strike out all the best passages. The same advice may often be shrewdly given to architects, especially in these days of piquancy at any price.

### THE OXFORD PRIZE POEMS AND ARCHITECTURE.

ONE of the institutions at Oxford is the production of prize poems annually. In old days it was supposed that the poet was inspired, and therefore could chant or write only on those occasions when he was in a particular mood. But the university authorities have taken another view. As SWIFT was supposed to be able to write beautifully, with no better theme than a broomstick, and WARREN's poet was always ready to be tender on blacking, so it has been, and is still thought, that an university student should always be competent to make his eyes roll in a fine phrenzy about the prosiest subjects. It is not surprising, a joker said, that "prize poems are not prized poems," and that critics have blessed the memory of Sir ROGER NEWDEGATE for limiting the competition for his prize to fifty lines.

Among the curiosities of that form of literature are the poems which treat of architecture, painting, and sculpture. They are likely to be unknown to the majority of our readers, and a few of the passages may have interest. Although the verses may not appear promising, some of the writers afterwards gained reputation. The subjects, it must be allowed, are not easy to treat. When Lord TENNYSON first appeared as a poet he made an excuse for one of his pieces by pleading the great difficulty of describing a statue in verse, and it is even more difficult to make a poem about a building.

The series of poems relating to art begins in 1806, when the subject was "A Recommendation of the Study of the Remains of Ancient Grecian and Roman Architecture, Sculpture, and Painting." The title is long enough for an epic, much less for a poem of about fifty lines. JOHN WILSON, who was afterwards known as CHRISTOPHER NORTH, was then probably the most remarkable among the Oxford students. In that year he performed his memorable jump of twenty-three feet on a level plane, and took rank as the best leaper in England. He had come up to Magdalen from Glasgow with a great reputation for intellectual ability, and his physical and mental gifts made him seem like some Greek hero who had revisited the earth. It was said of him at the time that he was endowed beyond all the youthful poets of the day, and in some powers beyond any of his contemporaries. Men were not surprised when it was found that he was the winner of the prize for English poetry. But the subject was not suited to his

genius. In his love of out-of-doors life WILSON was almost a gipsy, and indeed he lived in the tents of the tribe for a time. What could a man who was not at ease among the house-dwellers know about pictures or statues or classic buildings? He was compelled to be conventional, and lightly refer to Mrs. DAMER's pretty statues, the *Venus de Medici*, the *Apollo Belvedere*, and the *Laocoon*, and to introduce a conceit about Painting stealing the colours of the Sun and pouring them over Valour's wreath. The allusions to painting were indeed omitted when the poem was copied out, in order that there might be no more than the regulation number of lines. In conclusion WILSON introduced architecture in the following lines:—

Then turn the eye, where, spurning Time's control,  
Art stamps on stone the triumph of the soul:  
With trembling awe survey each hallow'd fane  
Ennobling Greece mid Desolation's reign;  
Each pillar'd portico and swelling dome,  
Proud o'er the prostrate majesty of Rome!  
While o'er the scene each mould'ring temple throws,  
Sacred to Genius, undisturb'd repose;  
Through twilight's doubtful gloom his eye shall trace  
The column's height enwreath'd with clust'ring grace;  
The light-arch'd roof, the portal stretching wide,  
Triumphal monuments in armed pride;  
Till bold conceptions bursting on his heart,  
His skill shall grasp the inmost soul of art;  
And Fame's green isle her cloud-capt towers display,  
Where grace and grandeur rule with equal sway.

WILSON followed the fashion of a good many other poems on architecture in thinking mostly of ruins, and possibly a building that is in use is too prosy to be worth a poet's notice. In 1810 the statue of the *Dying Gladiator* was selected for a subject, and the prize was obtained by GEORGE CHINNERY of Christ Church, who honestly acknowledges that he followed MONTFAUCON, WINKELMANN, and a French Encyclopædia in selecting the points for treatment. But the subject was afterwards treated by BYRON in "Childe Harold," and the popularity of his description gives little chance to its predecessor. BYRON makes the Gladiator a domesticated character, who, in his last moments, thought of his hut by the Danube and its inmates; CHINNERY, with more reason, supposes that he was thinking of revenge:—

His fix'd eye dwells upon the faithless blade  
As if in silent agony he pray'd,  
"Oh might I yet, by one avenging blow,  
Not shun my fate, but share it with my foe!"

The subject for 1811 was the "Parthenon," and if Mr. BURDON's prize poem is all that can be done with such a theme, it is as well that the building remained unsung for so long a time. There is so much of the inventory of an auctioneer's clerk in the following passage, it is a pity that a few touches in the GEORGE ROBINS' style have not been introduced:—

Neptune behind, in Parian stone, the earth  
Strikes; and behold a war-horse spring to birth.  
Next Pallas gives the word: from stony roots  
The branch of Peace in budding marble shoots.  
Eight fluted columns, rank'd in even file,  
In front and rear, adorn the shadowy pile:  
The channel'd triglyph, and its drooping base,  
Bespeak the new-born temple's Dorian race:  
There might you see a dread-inspiring sight,  
The Lapithæ and Centaurs wreath'd in fight:  
Those wield their giant limbs; these grasp their foe  
With sinewy arms, which branch from beasts below.  
Far sloping pillars range along each side,  
And stretch a portico sublime and wide:  
Six, at each front, retiring from the eye,  
Shun its observance, but to tempt it nigh.  
In slow procession move around the frieze  
Virgins, and Youths, and guardian Deities.  
Some stately ride, some march to measur'd sound,  
Whilst youthful champions walk their chariots round.  
Here victims pace their voluntary way,  
And bards proclaim Minerva's festal day.

It is rather amusing to find the author believing that it was Fancy painted his picture. The *Apollo Belvedere* was selected for 1812, and the prize-winner was HENRY HART MILMAN, afterwards Dean of St. Paul's. Strange to say, the student who worked himself up to a state of enthusiasm about a statue of a pagan god was unable to appreciate the work of STEVENS, which represented an English hero, and was indifferent to the



sculptor's fate. The man who in his youth heard APOLLO'S arrow hurtle in the sky and the "deathful cry" of the monster, could in his old age perpetrate an absurd joke about WELLINGTON riding in to St. Paul's on the top of his own monument.

FRANCIS HAWKINS, whose name was long associated with Oxford, was the winner in 1813, the subject being the "Pantheon." He was too sensible to pretend that he felt an awe of the work of the builder, and his taste would not allow him to count the columns or measure the dome. But he knew that his judges expected precision and tokens of having studied books rather than signs of poetic imagination. Accordingly he tried to be academic, and to produce something which, if not poetry, is an exemplification of the laws of rhetoric. One passage will suffice :—

In full proportion stands the solid fane,  
Fair as sublime, majestically plain :  
Mark the bold porch, on stately columns borne,  
Whose lofty brows light leafy wreaths adorn :  
Now stretch the view (the brazen gates expand),  
Pillars around and light pilasters stand :  
How teem the niches with celestial life,  
Where Art exults, and Nature yields the strife !  
Soft o'er the pavement blends each varied hue ;  
Light springs the dome, and circling fills the view.  
Lo ! Fancy, kindling at the sight, decries  
A mimic world, an emblem of the skies.  
Heaven's image here the Persian might adore,  
Wont on some mountain's brow his vows to pour,  
Who deems his God no narrow fanes can own,  
The world his temple, highest Heaven his throne.  
Here once in marble frown'd th' avenging Jove,  
Here stood the synod of the realms above ;  
Bright Heroes there, enshrin'd amongst the Gods ;  
Last the dread powers that rul'd the dark abodes.  
Vain phantoms !—chas'd by truth's all-piercing ray,  
Ye fled, like spectres from the face of day :  
Now through the vaulted roof Hosannas rise,  
And lift the soul in rapture to the skies.

It has been said by travellers that the Temple of Theseus at Athens is the finest ruin in Greece, and the prototype of the Parthenon. GELL considered it to be the most beautiful and best preserved monument of antiquity. The Temple formed the subject of the prize poem of 1815, and here is Mr. RICKARD'S description :—

Above the pride of Art, and boldly plain,  
In simplest grandeur stands the Dorian fane ;  
High on the strength of six fair pillars borne,  
The stately front o'erlooks the gate of morn,  
While Time's warm tints, with mellow lustre thrown,  
In dusky gold imbrown the channel'd stone.  
Fix'd on th' unrivall'd deeds Alcides wrought,  
Here Mycon's soul the flame of glory caught,  
Till breathing sculpture, spread through every part,  
Had vanquish'd Nature, and exhausted Art.  
What though the sullen tempests, as they pass,  
With envious wounds invade the perfect mass !  
'Tis but the scar that veterans joy to show,  
The pledge of conquest o'er a stubborn foe.  
Far-stretched on either side, a shapely file  
Of fluted columns lift th' incumbent pile ;  
Where once, rich-blazon'd on the bossy stone,  
In sculptur'd pomp the spoils of battle shone ;  
In friendship's cause there Theseus sped the blow  
That plung'd in death the Centaur-fiend below ;  
But these are sunk in dust ; or, dimly seen,  
Yet strive to image what the past hath been ;  
As oft at eve remains a blushing ray,  
That parting tells how glorious was the day.

This passage suggests that the author had carefully read the descriptions of the Temple. There has been some diversity of opinion about the number of columns which stood at the sides. STUART says there were thirteen, DULOU and LEROY maintain there were fourteen, while FOURMONT allows only twelve. The Oxford laureate gets over the difficulty by simply describing the columns on the flanks as a "shapely file," which may mean any number. Out of the sixty-eight metopes only eighteen appear to have been sculptured, and it has been conjectured that the remainder may have been filled with painted figures, the sculptured metopes being also coloured. There is consequently some warrant for the expression, "rich blazon'd on the bossy stone."

The descriptions of the Coliseum in "Childe Harold" and

"Manfred" could hardly fail to exercise some influence in Oxford ; and, accordingly that building was set down for the subject of the poem in 1818. But there is no trace of BYRON'S passion in Mr. OMEROD'S verses, as an extract will show :—

Here rifted arches, nodding to their fall,  
In triple circuit lift the pillar'd wall :  
Though spoil'd by rapine of their binding brass,  
Self-pois'd they hang—an uncemented mass :  
Here ruin'd piles their rugged front display—  
Commingle strife of grandeur and decay !—  
Huge corridors, where sculpture breathes no more,  
But rank weeds cluster on the mould'ring floor—  
Deep cavern'd vaults, where tuneless night-birds dwell,  
Or lurks the bandit—in the lion's cell.  
No more slow-widening with proportion'd size,  
Tier above tier, those circling seats arise ;  
Whence erst, 'mid shouting throngs, imperial pride  
Look'd down un pitying—while her children died—  
What time the white-rob'd vestal's stern command  
Bade hero ruffians lift the hireling hand :—  
Proud wreck of guilty majesty, declare  
Where now thy pomp ? thy crowding myriads where ?  
All—all is past, and o'er the crumbling stone  
Still Desolation rears her giant throne.

The poems we have mentioned treated of buildings of which a part at least was to be seen, and with the aid of imagination the temple or the arena could be reconstructed. But when in 1820 "The Temple of Diana at Ephesus" was selected the competitors were in a different position. "I have beheld the Ephesians' miracle," wrote BYRON ; "its columns strew the wilderness." Since his time something has been done towards the exploration of the place, but it is still most difficult to form an idea of the Temple. Mr. EWART is not, therefore, to be condemned because his poem is indefinite :—

Lo ! on Ionia's polish'd pillars borne,  
Its bold front hails the rosy realms of morn !  
Majestic monuments of lordly fame,  
Each the frail record of a regal name,  
Who now shall trace where Scopas' chisel taught  
The conscious stone to waken into thought ;  
Or where, instinct with life, the tints grew warm  
Beneath Apelles' touch, and melted into form ?

In the following year the subject was Pæstum, and the prizeman was the Hon. GEORGE HOWARD, who afterwards gained some reputation as Lord MORPETH and Earl of CARLISLE, a statesman and a writer of verses. A man who was a poet could have made something out of Pæstum ; but Mr. HOWARD never rose out of the commonplace. Probably all the other attempts differed little from the following :—

In solemn beauty, through the clear blue light,  
The Doric columns rear their massive height,  
Emblems of strength untam'd : yet conqu'ring Time  
Has mellow'd half the sternness of their prime,  
And bade the lichen, mid their ruins grown,  
Imbrown with darker tints the vivid stone.  
Each channel'd pillar of the fane appears  
Unspoil'd, yet soften'd, by consuming years ;  
So calmly awful, so serenely fair,  
The gazer's heart still mutely worships there.

Mr. HOWARD'S poem is probably better known than most others of its class, for it has been introduced into MURRAY'S Guide for the benefit of travellers who have the courage to visit Pæstum. Whatever may now be thought of the prize poems, it is evident that the authorities of Oxford were of opinion that architecture produced better exercises than other themes. In no other way can we account for the adoption of architectural subjects for so many years in succession. Mr. AMBROSE BARBER won the prize for 1822. He addressed "Palmyra" in the following style :—

O'er the hush'd plain where sullen horror broods,  
And darkest frown the Syrian solitudes,  
Where Morn's soft steps no balmy fragrance leave,  
And parch'd and dewless is the couch of Eve,  
Thy form, pale City of the waste, appears  
Like some faint vision of departed years.  
In mazy cluster still, a giant train,  
Thy sculptur'd fabrics whiten on the plain ;  
Still stretch thy column'd vistas far away  
The shadow'd dimness of their long array.

Mr. RUSKIN once advised architects to think in shadow, and the Oxford poets anticipated him in adopting if not in



formulating the maxim. One man thinks of the shadows in the Eastern desert, and another of those on Salisbury Plain. Mr. SALMON in describing "Stonehenge" wrote:—

Wrapt in the veil of time's unbroken gloom,  
Obscure as death, and silent as the tomb,  
Where cold oblivion holds her dusky reign,  
Frowns the dark pile on Sarum's lonely plain.  
Yet think not here with classic eye to trace  
Corinthian beauty, or Ionian grace:  
No pillar'd lines with sculptur'd foliage crown'd,  
No fluted remnants deck the hallow'd ground;  
Firm, as implanted by some Titan's might,  
Each rugged stone uprears its giant height,  
Whence the pois'd fragment tottering seems to throw  
A trembling shadow on the plain below.

The "Arch of Titus," which was selected for the poem for 1824, was a less extensive subject, and the prize was carried off by Mr. JOHN THOMAS HOPE. In this case there is a nearer approach to realism in the description of the arch:—

With mingling beauties crowned, the columns tower,  
Ionia's graceful curve, and Corinth's flower;  
And tapering as they rise aloft in air,  
The sculptur'd frieze and votive tablet bear.  
From o'er each column Fame exulting springs,  
Seems stretch'd for flight, and waves her golden wings:  
Yet linger not! within the circling space  
The storeyed walls more radiant beauties grace;  
In warlike pomp the triumph's rich array  
Leaps from the living marble into day.  
High on his car the victor borne along  
Hears with exulting heart th' applauding throng;  
With sparkling eye surveys the sacred spoil,  
And feels one hour o'erpay long years of toil.  
Lo! Judah's swarthy sons before the car,  
The wither'd remnant of disease and war!  
Rebellious passions light their faded cheek,  
And all the bitter pangs they dare not speak.

It is difficult to say in looking at the Temple of Vesta at Tivoli which is more deserving of admiration, the building or the site. This may explain the short description which is given of the Temple itself by Mr. SEWELL:—

And lo! where still ten circling columns rise  
High o'er the arching spray's prismatic dyes,  
Touch'd, but not marr'd—as Time had paused to spare  
The wreaths that bloom in lingering beauty there—  
E'en where each prostrate wreck might seem to mourn  
Her rifted shaft, her lov'd acanthus torn,  
Nature's wild flowers in silent sorrow wave  
Their votive sweets o'er Art's neglected grave.

"Trajan's Pillar" was adopted in 1826, and it was followed by "Pompeii." Mr. HAWKER's prize poem is of unusual length, but we must restrict our selection to one passage:—

But see! once more beneath the smiles of day,  
The dreary mist of ages melts away!  
Again Pompeii, 'mid the brightening gloom,  
Comes forth in beauty from her lonely tomb.  
Lovely in ruin—graceful in decay,  
The silent City rears her walls of grey:  
The clasping ivy hangs her faithful shade,  
As if to hide the wreck that Time had made;  
The shatter'd column on the lonely ground,  
Is glittering still, with fresh acanthus crown'd;  
And where her Parian rival moulders near,  
The drooping lily pours her softest tear!  
How sadly sweet with pensive step to roam  
Amid the ruin'd wall, the tottering dome!  
The path just worn by human feet is here;  
Their echoes almost reach the listening ear:  
The marble hall with rich Mosaic drest;  
The portal wide that woos the lingering guest:  
Altars, with fresh and living chaplets crown'd,  
From those wild flowers that spring fantastic round,  
Th' unfinished painting, and the pallet nigh,  
Whose added hues must fairer charms supply:  
These mingle here, until th' unconscious feet  
Roam on, intent some gathering crowd to meet;  
And cheated Fancy, in her dreary mood,  
Will half forget that all is solitude!

With the exception of "Stonehenge," all the subjects are Classic buildings, and when a painting was suggested it was *The Iphigenia* of TIMANTHES. The reason is that between 1806 and 1826 Oxford paid little attention to anything that was not described in Greek or Latin books. Nevertheless,

some acknowledgment is due to the men who at that time had sufficient esteem for architecture as to suggest that it was adapted to inspire the young poets of the University.

## STUDIES OF LONDON CHURCHES.

[BY A CORRESPONDENT.]

FROM time to time notes on London churches have been published in *The Architect*, one instalment ending in August 1883. The writer now proposes to complete his studies, which he trusts may be found useful to students, as they describe the most noteworthy churches in the metropolis. His endeavour has been to be impartial in his criticism, whatever may be the style, and he has spared no pains to attain accuracy.

The fine church of *St. John the Evangelist*, Hammersmith, the work of Mr. Butterfield, has been alluded to in these columns previously, so only a few points connected with the more recent additions to it need be mentioned. There is a considerable amount of colouring to the nave-aisle walls and to the roof. The stone columns are also painted red, but not so the stone arches. This does not have a good effect. The majestic oak chancel screen consists of five panels, each arched and cinquefoil cusped, the central one being wider than the rest and gabled, with tracery over it, consisting of a circle quatrefoil cusped, and two larger circles under cinquefoil cusped, the whole richly moulded. Instead of the cross, the pelican in her piety is represented, a not very usual feature in modern churches, though not uncommon in the chancel screens of the time of Wren and his school. It will probably be long before this ancient symbol of our Saviour is disused, notwithstanding that the beautiful legend of the mode in which the pelican nourishes her young has been disproved as not being in accordance with natural facts, like many other beliefs which we had in the days of our childhood. For example, though the cross of suffering, as generally represented, has long been known as not of the historical form, yet the conventional shape so familiar to us is still loved and retained, and its appropriateness felt. The screen, having been added subsequently to the erection of the church, partly hides a small portion of the respond to the chancel arch. The various parts are perhaps rather large in scale, and the treatment somewhat too much resembling that of stone. Nevertheless it is a fine composition, and to those who remember the church before the screen was added it is surprising what an improvement it has made, even though the want was not before so apparent. The muntins carrying the central arch are of good width, but in this position do not, of course, injuriously intercept the view eastwards; a shaft and respond shaft carry the cusped arches. It is rather unusual to find columns in this position, but in a parclose screen to Northfleet Church of thirteenth century date an example occurs. The oak to the screen at St. John's Church is stained one or two different shades, the columns being the darkest. But surely it would have been better to have left all the oak its natural colour, clean from the tool, to darken and mellow in time! In all the Mediæval wood screens (in England at any rate) the cornice runs through from end to end without break, but Mr. Butterfield has here, with his accustomed boldness, taken a "new departure." At the end of the screen and to the central muntins occur small buttresses with gabled tops. The upper part of the composition is treated in a rather unusual way, as there is a long panel with a series of quatrefoils under the cornice. The latter has a peculiar ornament at its summit, a series of small panelled squares springing out of a splay. This has almost the effect of an embattlement. Turning from the screen, the fine clerestory of the nave is more effective internally than externally, as there is only a single chamfered order outside. To the chancel is a three-light east window, but no side windows. This is to be regretted, as a side light, however small (particularly on the south), is always very desirable. The tower, with saddle-back roof, lately added to the church, is simple and severe, almost to a fault, standing nearly detached. One of the bells is rung from the porch, which forms the ground storey of the tower.

*St. Augustine's*, Bermondsey (why are nearly all the churches of that dedication in London, of which there are about seven, so good in design, though the composition of different architects?) is a clever specimen of a modern town church, and no mean reproduction of a Mediæval building. It sets forth a faithful following out of the grand principles of Mediæval art, principles shadowed over for a season, like an April sun, with showery clouds, but ready to shine forth brighter than ever after their temporary eclipse. The only point in which a little weakness occurs is the detail of the mouldings, which is not equal to the general composition. Though the chancel roof externally is higher than the nave, this is not so internally, as the chancel is vaulted, the nave having a panelled wood ceiling. No attempt has been made to vainly conceal the tie-rods to the groining (which is highly domical in character) by decorating them in colour or other ornamentation. There they are, naked and unadorned, cutting into



the brick vaulting. Viewed internally, the east end of the chancel is a fine composition, and displays a large amount of patient and original study. As the chancel is of considerable width, the east wall does not appear crowded, notwithstanding the triplet window in the centre, with couplets at the sides. Yet this is practically equivalent to seven lights, without any appearance being given of a wall of glass, the piers being of amply sufficient and substantial character. There is one cardinal virtue in the church—perhaps almost a necessity where the span of the roof is much greater than the average—*i.e.*, the thickness of the walls. If the student were to examine the interior first, he would think the walls were thicker than they really are, for externally there is a very shallow reveal up to the glass line. Greater importance has evidently been attached to the interior than to the exterior, and very properly so. The inside treatment of the windows to the nave aisles is ingenious, and at first sight rather puzzling. They are couplets, but have three rear arches, of an order quite distinct and separate from those outside. They are almost more ornamented than the chancel or clerestory windows, which is scarcely desirable. These two distinct planes of tracery, only possible in a thick wall, are an enormous gain to the interior of a church, and it is greatly to be regretted that want of funds prevents so beautiful a feature being more often employed. Some braces in the nave ceiling cut into it longitudinally in a rather awkward manner, though this was doubtless necessary for constructional reasons. In the chancel (of three bays) is a rather unusual feature—a large plain surface of wall, designed with a view to future decoration, between the top of the arches opening out into the aisles and the clerestory windows. Such a treatment is not at all uncommon in the churches of Italy—as at Rome and Ravenna—but not often accepted in England. The responds of the archways on the north and south of the chancel possess no capitals or abaci, but only base mouldings, and look scarcely rich enough for the situation. The chancel aisles are on the same level as the nave. Should it happen by any misfortune that pew-rents are ever established in this church, it will be absolutely necessary to raise the level of the pews here, otherwise they will never “let.” Such is the experience of the writer in a large church he designed, where the chancel aisles were raised 6 inches above the nave, and were about 12 inches below the chancel floor line. At the east end of the chancel three arches open out into an aisle, the side aisles being “returned.” There are several advantages in this plan, among which is that the east end never looks bare if without a reredos. Where a rich reredos exists, as is the case at St. Augustine’s, Kilburn, the effect is very good with this aisle in the eastern background. This aisle is at present made use of as a vestry, but preparations for a more permanent vestry at a future time have been made on the north side of the chancel. The nave clerestory windows appear rather like dormers externally, and project slightly. The organ chamber resembles a first floor to a transept, opening out of the chancel, with a little balcony of shallow projection where the organist sits. Beneath it is the chancel aisle, which of course has a flat ceiling, being under the organ gallery. Instead of principals to this ceiling there is a traceried arch subdivided into two smaller arches, which help to support the gallery. Externally a turret is cleverly arranged to break the wall line. In fact, all round the organ chamber blank spaces of wall are well diversified without recourse to any windows, which would be of no use and undesirable in this case. The whole of the floors, both of the passages and under the seats, are of Portland cement. The seats are of deal ebonised, and look well when the funds will not allow of oak benches. The east end of the church is not much seen, owing to adjoining houses, but is striking in appearance, with boldly-projecting buttresses. Since the writer examined this interesting church the remaining western bays of the nave have been added and the permanent west front, which may possibly be commented upon some other time.

The *Church of the Holy Innocents*, Hornsey, is a good specimen of a village church, though the great metropolis is creeping up to it, and the increase of population in this neighbourhood is its *raison d’être*. It is built principally of stock bricks, with red brick arches and bands. No plastering is used externally, as the walls are only pointed. The chancel is a little higher than the nave, but too short to look well either externally or internally. The tower is placed on the south side of the east end, its ground storey forming the organ chamber. There is no regular clerestory, as the nave is not of sufficient height for such a feature; light at a high level is admitted by a large dormer window—an economical plan, saving walling, but, except for a village church, not sufficiently dignified. The nave arcade is in four bays, with a plain space of wall at the west end, pierced by a small archway. The latter well helps to mark the spare space or passage behind the seats. The nave roof is open-timbered, having trusses with tie-beams and king-posts. There are likewise intermediate trusses, without tie-beams. It seems of rather too plain design for ecclesiastical architecture. The reveals to the windows and the nave arcades are all of brick, square-edged. The aisles, one only of which is permanent, will be about eleven feet wide, with lean-to roofs. The tower is very plain, without buttresses, the only projection being a

stair-turret. Though there has been no opportunity in this church of much display in originality, owing to limited funds, yet it has the merit of being a good, honest, straightforward building, worthy of its eminent architect, Mr. Blomfield.

*Holy Trinity*, Dalston Junction, was finished in 1879, and the same remark applies to it as to several of the churches previously commented upon. It is a good type of that style of brick building, with stone sparingly introduced, which has sprung up within the last twenty years. The plan comprises a nave of considerable span, and rather narrow windowless aisles about eight feet wide. The proximity of other buildings prevents any side-light being obtained here except from the clerestory. As occurs in several London churches, the principal access is at the east end, which necessitates a porch and vestibule on the north side of the chancel. This is always a somewhat inconvenient arrangement, as every one coming into the church has to face the congregation already assembled. There are north and south aisles to the chancel, roofed transept-wise, the southern one forming the vestry, with the organ-chamber above it. The northernmost aisle becomes a vestibule, with a church-room over. The greater portion of the chancel is under the tower, which is not square in plan. It is roofed with a span roof hipped at each end, and consequently has a piece of straight ridge. On the long side of the tower are three windows, on the short side two. Where the design, like this, is unpretending, with a simple brick corbel course and no parapet, this type does very well, and has the advantage of saving expense, by utilising the ground storey of the tower. For if the latter is to be necessarily square it will often cause difficulties. The lower part is groined in brick, the eastern portion of the chancel, not under the tower, being barrel-vaulted in the same material. One of the disadvantages of the choir being placed in this situation ought not to be forgotten—the room which the projection of the piers, necessary to carry a tower, occupies. In the present example, owing to this, the men in the back row of the choir seats can scarcely be seen. Were this not so, part of the width of the chancel would be wasted if the seats had been advanced. There is no pulpit, but a brass desk is placed facing west on a low stone chancel screen wall. The glazing of the east window is more elaborate than that in the rest of the church, all of cathedral rolled glass. Its composition mainly consists of circles. The nave has an open-timbered polygonal “trussed rafter” roof, with king-post and tie-beam trusses. As all the timbers are of stout scantling (a virtue which Mr. Christian, the architect of the church, always affects) the roof has a good appearance. Over each bay of the nave arcade are two clerestory windows, each set in a brick arch recessed 4½ inches, the brick piers dividing them being square in plan. The spandrels over the nave arches are enriched with circular panels of diapered brick, the effect of which is pleasing. The capitals are particularly good with square abaci and a species of simple carefully-studied carving, Transition-Norman in feeling. The piers are of a greyish stone and rest on rather high pedestal bases, the latter, in the writer’s humble opinion, being always a mistake. The seats to the body of the church are remarkably plain and of skeleton framing.

*St. James’s*, Peckham, the design of Mr. Blomfield, is built of stock bricks, with red bands. The plan is a nave, with lean-to aisles; a north and south porch towards the westernmost end of the nave; north and south chancel aisles with gables at right angles to the chancel, and lean-to aisles on each side of the latter, the north of which forms the clergy vestry, the south one a porch. The north chancel aisle is devoted to the choir and to the organ. The church is, therefore, exactly symmetrical in plan, an unusual thing in a Gothic building. To the nave aisles a feature occurs of which Mr. Blomfield is rather fond, a couple of gables or large dormers, with three-light windows. There is no tower, but a west gable turret, with three openings for bells, the whole very picturesquely treated. But beneath the thicker part of the wall, under the turret, is a two-light window. Now, is it desirable to thicken out a wall in such a situation so as to strengthen it, and then weaken it by inserting a window? There is precedent in Mediaeval examples, as at Manton Church, Rutland, but that does not necessarily prove its virtue. The nave arches are of ordinary brick, plastered over, not pointed, and this gives a common appearance for the present, but the obvious intention is to apply colour decoration, for which plaster is the best vehicle. The roof to the nave is a tie-beam one, with two intermediate hammer-beam trusses in each bay. The church is plainly treated with square brick reveals, and chamfers are infrequent.

*St. Dunstan’s*, East Acton, is another brick church, but the bricks are red, and there are stone dressings internally. In plan the building is rather different to some of the churches just described, as it has a nave and chancel, no clerestory, and a wide span roof aisle on either side. Abundance of light is afforded by large three-light windows to the aisles, but at the period when the writer inspected the church, very shortly after its being consecrated, none of the aisle windows were made to open, and the admission of fresh air was only obtained by a couple of gratings,



14 inches by 9 inches, placed under each window, communicating with air-flues which discharged on the top of the flat eills, the latter being easily accessible. The tower is on the south side, with a spire of red brick relieved by a few stone bands. The spire looks picturesque through the trees as the traveller approaches it from Bedford Park. The organ (which has a rather fantastic case) is placed at the west end of the nave in a gallery. The westernmost respond of the nave arcade stops short of the west wall to give some plain wall space. Under the organ gallery is an ornamental glazed screen dividing off a vestibule, west of which is a lean-to porch with entrances at its north and south ends. What a mistake is such a retrograde step, the placing the organ in this situation! Another "harking-back" to obsolete practices is making the nave seats some 8 or 9 inches higher than is usual, and with doors. The roofs are of trussed-rafter construction, with cross-braces and collars, boarded at the back of the rafters, braces, and collars, a small chamfered fillet being fixed on each side of the rafters to give them greater apparent width. The effect is good, and cannot be called a sham. In utility it is a compromise between an open roof and a panelled ceiling, as a neutral space of air lies above the collars and braces. But just where the boarding occurs at the back of the rafters, this advantage is of course lost. There are contrivances in the ceiling for the emission of vitiated air at the level of the collar beams. The flat inner sills of the windows previously mentioned are of chamfered brick; stone would have looked much better in such a situation, and its extra cost amounted to very little.

The parish church of *St. Mary*, Ealing, originally built in 1735, was cleverly re-cast by the late Mr. S. S. Teulon several years since. The material he had to work on was singularly unpromising, for at the period when the church was erected ecclesiastical architecture was at a very low ebb. Not much of the original building, however, remains. The broad aisleless nave has now much the appearance of possessing aisles. The iron pillars which help to support the galleries, carry ornamental wood arcading. The true aisles are the ambulatories or side passages, of low height and no more width than is sufficient for their purpose. The buttresses are carried on solid arches and walls over the aisles, so that the rather expensive mode of lead flashings to the side of each buttress became a necessity. Moreover, any such point is more particularly vulnerable to wet and frost, and it is a great object in this church to avoid such places as far as possible. The vestibule at the west end of the building is large and elaborate, and is virtually a lean-to aisle. The way in which the stair-turrets to the galleries are contrived, and the whole composition of the west façade is clever, and has an imposing general effect, though there are some matters of detail which might fairly be criticised. The pulpit is of considerable height in order to command the galleries, and necessarily has a long staircase up to it (with elaborate wood balustrading). Perhaps the architect was well advised here; whereas a low pulpit had best have the steps small and inconspicuous, with no handrail or balustrade. Speaking of the latter it may be mentioned that at the church of *St. Mary-at-Hill*, Eastcheap, the staircase up to the pulpit is really a pretty feature, an exceptional thing. The details are of the Wrenian type, though the pulpit was erected during the present century.

(To be continued.)

#### JAPANESE ENAMELS.\*

THE art of enamelling combines chemical science with metal work, and is one of the noblest and oldest of crafts. When or where it originated is unknown. As soon as men could make ornaments with gold or silver wire, or with narrow bands of metal, it would be only a step further to attempt the filling of the open spaces with a coloured material, and accident if not design might lead to the filling of the cavities on the reverse side of a piece of repoussé metal work. One thing is certain, that the craft has been practised in India, and especially in Rajputana, from time immemorial, and it is only by keeping in view the characteristics of Indian art that we are able to comprehend the idea which is still revealed by the best kinds of enamelling. India is the land wherein pierced work and repoussé work prevailed, and enamelling is but an accompaniment to them. The art was at a very early age introduced into China, and at a much later time it was known in the West. The Greeks knew how to employ fused colours. That the art was not confined to one place is seen by the statement in a Roman book of the third century, that the barbarians who lived near the ocean ornamented the trappings of their horses with enamels. It is remarkable that examples of the earliest Anglo-Saxon ornaments in the Ashmolean Museum are adorned with what appears to be enamel, although some of the divisions may be filled with coloured stones or pastes like the Egyptian jewellery. Byzantium appears to have been a seat of the industry from the fourth to the eleventh century, and in conse-

quence it was at one time supposed that enamelling had been derived from Mosaic work. In that valuable cyclopædia of early European art, by the monk Theophilus, there is a most interesting description of enamelling as applied to the decoration of an altar vessel. The bands, he said, were to be formed of very fine gold, and so bent to the form of the ornament that was desired. The spaces were to be filled, one after another, with an enamel which had been carefully prepared and then soldered. The precision of the instructions shows how well cloisonné work was understood in the eleventh century in the East of Europe.

The Japanese have derived their knowledge of cloisonné enamelling from the Chinese, but at what time, the art was introduced has not been recorded. The earliest examples are marked by the use of deep red and blue. In later examples the colours are lighter, and the partitions follow more perfect curves. Mr. Bowes, in the interesting essay on "Japanese Enamels," says there are three clearly marked classes, which he terms Early, Middle period, and Modern. The foundation of the cloisonné in the Early and Middle periods is excessively thin metal, sometimes one-sixteenth of an inch thick, and in this respect the work differs from the Chinese. But we have not to go back for the best examples of the art. The choicest works in lacquer were made in the period between 1688 and 1704, and according to Mr. Bowes, "it is not unlikely, therefore, that the last century was the most brilliant period of Japanese art, and it may be correct to assume that the choicest examples of cloisonné enamelling belong to that period."

The rules which determine the forms of the largest works in iron are no less applicable in the case of the minutest cloisonné partitions. Metal if flexible is also rigid, and one quality is as much worthy of recognition as the other. In the best Japanese examples we therefore find a great number of straight lines in the form of geometrical diapers, frets, radii forming petals, and so on. A contrast with them is formed by figures of native birds, flowers, trees, and fishes. The human figure is rarely found on old enamels, and Mr. Bowes says he has met with only three examples. As in other descriptions of Japanese work, the forms are not always graceful, and it must be owned that they are often ugly. The paste was found on analysis to consist of about 52 parts of silica, 37 of oxide of lead, 5 of soda, and 5 of lime. It is coloured by the addition of metallic oxides; cobalt is added for blue, iron for grey, yellow and pink; iron and copper for black, and bone earth for white. The old paste has more depth and softness than the modern. Generally every compartment consists of paste of one colour, but "sometimes a single space will contain two or more colours, and it seems as if the pastes had been of a sufficient consistency to prevent any general mixing of the colours, although they blend a little at the place where they meet."

It is remarkable that in Western Europe little attention was given to Japanese enamels until quite lately, and the examples in the international exhibitions were of modern work. Mr. Bowes believes that he possesses two-thirds of the old ware which has reached Europe since 1872. Enamelling seems to have been a sort of privileged art which only the highest classes were able to possess, either in their palaces or special temples. It is not even mentioned by such travellers as Koempfer and Siebold. The modern enamel of Japan is not equal to the work of the last century, and specimens are to be had at so low a price that it is difficult to understand how they have been produced. Mr. Bowes is the happy possessor of nearly two hundred examples of old work, and in the volume which he has produced he gives descriptions of them, with photographic or chromo-lithographic illustrations of several of the best works. The book is a worthy companion to the splendid volumes which bear Mr. Bowes's name.

#### VANDALISM IN COVENTRY.

AT the meeting of the Poor Law Guardians of the Coventry Union on the 3rd inst., Mr. Goate called attention to an act of vandalism which had been committed upon the Guardians' property in Little Park Street, where the vaccination station was now being rebuilt, in the destruction of a very fine crypt. All thinking men were unanimous in a desire to preserve such monuments and memorials of the past, especially when they illustrated different periods of architecture, and he feared that the destruction of this crypt would cause the perpetrators of it to be held up to scorn for many years to come. Having offices very near to the spot, he had heard expressions of opinion from numerous people, who concurred in condemning the act, the general feeling being that such wanton destruction should not have been allowed. He was quite sure the General Works Committee could not have been fully aware of what was about to be done. Underneath that property was one of the finest ancient crypts in Coventry, having a solid groined roof which was capable of supporting any amount of pressure, but for some reason or other every stone of it had been removed, except the side walls. Surely no effort should have been spared to preserve such a valuable archaeological treasure. If the arch had not been sufficiently strong to bear the weight of the new building, supports might have been built under it, as was done in the case of the Coventry and Warwickshire Bank, where the original vaulting was preserved intact. He wished to know what

\* *Japanese Enamels*. By J. L. Bowes, Liverpool. Printed for private circulation.



reason the General Works Committee had to give for the course that had been adopted.

The Chairman of the General Works Committee in reply said the contractor called his attention to the desirableness of retaining this roof, and said the foundation could be built in such a manner as to leave it intact. The General Works Committee held a meeting on the ground, and asked their architect (Mr. Whitley) if such a thing could be done. Mr. Whitley replied that he would not be answerable for the building if such a thing were done, and that was the reason why such a work of destruction as mentioned by Mr. Goate had been permitted.

Mr. Beamish supported Mr. Goate's remarks, and said he believed he was stating a positive fact when he said that not a single member of the committee believed that the fine piece of architecture would be destroyed as it had been. He had spoken to a practical man who was on the spot the previous day, and he said if it had been possible to put St. Michael's Church on those arches, which were the finest he had ever seen, they would have borne it. He (Mr. Beamish) contended there was not the slightest necessity for that work of destruction. There was matter there extremely interesting, not only to Coventry, but to people outside, and the work that had been done ought not to have been done until the last moment when everything else had failed. As the architecture had been pulled down, some of the guardians were on the ground on the previous day and saw stones extremely interesting and handsomely carved. They gave instructions to the builders to remove them to St. Mary's Hall, so as to preserve them for the benefit of archaeologists and others interested in the work. Such an act of wanton destruction, he said, was only worthy of the barbarous ages, and he thought greater respect ought to have been paid to such a handsome crypt. He disapproved of the whole business, as did also the General Works Committee on the ground.

Mr. Haywood endorsed the remarks of previous speakers, and expressed his sorrow that the surveyor should have given such a decision; but, if they employed a surveyor, they must abide by his decisions.

Mr. Snape said it was the last of his thoughts that this ancient cellar should have been destroyed.

The Chairman said he could only regret that such a piece of work had been destroyed, but if it was the opinion of the surveyor that the building would have been unsafe they must abide by it. They all would regret the destruction of such a beautiful piece of workmanship, and wished it could have been arranged otherwise.

Mr. Whitley having been called upon, said he might point out with regard to this cellar roof, that in his first plans he so prepared them that the ceiling would have been preserved entire, but the General Works Committee told him to throw away his antiquarian notions and old fageisms, and to make a clean job of it. Again, as the ceiling would be subdivided into four or five parts, its original dimensions would be lost, and he could not see then where its beauty would be. As planned, the cellar, he was told, would be of very little use to the occupants of the house, and the plans were overruled. That was all he could say about the matter. The committee ordered it.

The Chairman said he thought there must have been a mistake somewhere. We cannot help it now; the mischief has been done.

Mr. Lloyd said it was quite true, and he thought it should be stated that in the plans first prepared by Mr. Whitley he particularly desired that the cellar should be kept intact.

Mr. Newsome said he could quite bear out Mr. Whitley in his remarks as to his wanting to preserve the arches of the cellars. Mr. Whitley had told him that he was anxious they should be preserved, but somehow the committee did not seem to fall in with the idea, so that under the circumstances he thought they must exonerate Mr. Whitley from blame.

Mr. Booth: And blame the committee.

Mr. Beamish said the committee must be exonerated from all blame, as they were on the ground, and expressed a desire to preserve these cellars, and asked Mr. Whitley to preserve them.

The Chairman: If Mr. Whitley was instructed to do away with antiquarianism what was he to do? The only thing to be done now was to express deep regret that such an act of destruction had been committed.

After some further discussion,

Mr. Beamish said he had arranged with the contractor to remove several of the stones to St. Mary's Hall, and would himself bear the expense of their removal.

#### A SHAKESPEREAN VILLAGE.

A FANCY fair and bazaar has been opened in the Town Hall, Birmingham, with the object of obtaining funds to build schools, according to designs by Messrs. Ingall & Hughes, in connection with the Westminster Road Congregational Church. The principal feature is what is called a Shakesperean village, designed by Mr. G. H. Bernasconi, but which in reality consists of a grouping of architectural objects associated with or contemporary with the life of the poet, though not actually found in such close topo-

graphical connection as that in which they are represented at the Town Hall. The *Birmingham Post* says the combination is one exceedingly well adapted to the methods of scenic decoration for which Mr. Bernasconi has become famous, and the result is highly realistic and effective. On the orchestra has been built up a representation of a portion of Warwick Castle. The general effect of this, as viewed from the floor of the hall, is imposing, while the architectural details are tolerably correct, and the appearance of the weathered masonry has been beautifully and accurately counterfeited. Some slight departures from the original have been rendered necessary by the conformation of the orchestra; but, on the other hand, the gradations of the substructure have been turned to good account in producing the effect of a massive pile of buildings, with terraces and walks which in theatrical language are described as "practicable." It is intended that each evening the lady stall-keepers, who will be dressed to represent characters from Shakespeare's plays, shall issue in procession from the large gateway in the background, and, after winding about among the turrets and battlements of the castle, descend by a zigzag path along the mimic terraces to the floor of the hall, round which they will pass, and then file off to their respective stalls. The stalls or shops—for their situation suggests the latter designation as the more suitable—are in the lower portions of what appear to be specimens of the domestic architecture of Warwickshire in the Tudor period. On the left, looking from the orchestra, the middle stall represents Shakespeare's house at Stratford-on-Avon, as it appeared before its restoration, and the two stalls flanking it are presentments of other old houses in the same street. Facing "Shakespeare's house" is "Ann Hathaway's cottage," on either side of which are representations of other old Warwickshire tenements. The great gallery is hidden by a view of Stratford-on-Avon Church. Under the great gallery is the refreshment stall, with a frontage in harmony with the other decorations, and exhibiting the sign of "The Shakespeare Inn." Facing this a stall for miscellaneous articles occupies a recess in the castle wall, while in the centre of the room a structure representing an ancient village market house forms the flower stall.

#### THE BRADFORD TOWN HALL.

A MEETING of the Bradford Town Council was held on Tuesday, when Alderman Hill moved a resolution that all necessary steps be taken for enlarging and extending the present municipal buildings for the better transaction of the public business of the town; that the subject of designs for the proposed extension be submitted to competition; and that as soon as possession is obtained of the requisite land, a new street be formed from Chapel Lane to Nelson Street. He said that as to the question of extending the municipal offices, the proposal was unanimously agreed to at a meeting of the Finance Committee. When the present municipal offices were built, the population of Bradford was 146,000, and at the middle of last year the Registrar-General estimated the population (inclusive of the recently-extended portion of the borough) at 204,000, so that from the time of the building of the town hall to the present time there had been an addition of one-third to the population of the borough. Although the town hall had cost a deal of money, there was not the accommodation which there ought to be for the outlay. At present many of their officers had to perform their duties in very small rooms, and, as an instance, their medical officer of health occupied a room which was only like a small cellar kitchen. The accommodation for the rate-collecting department was not adequate for the business of a town of even 20,000 inhabitants. He might say, further, that the work of the School Board had increased so largely that it would soon be necessary for new offices to be provided for that body, and the ratepayers would have to find the money for that. But the School Board could not erect offices without perhaps spending more money than it would cost to provide the requisite accommodation in the municipal buildings. It was also urgent that the land on the south side of Chapel Lane should be utilised, as now that there were tram-cars running in Manchester Road, it was necessary to make the new street from Chapel Lane to Nelson Street, so as to relieve the traffic in Manchester Road. On these grounds he hoped the council would adopt the resolution.

Alderman Moulson moved an amendment to omit that portion of the resolution relative to submitting the designs to competition, and to appoint Messrs. W. & R. Mawson as architects for the extension. He said that it would be unbecoming of the council, and an insult to the firm of architects who designed the town hall, to seek plans elsewhere. Messrs. Mawson had already prepared plans for the extension; these were all that could be desired, and provided for splendid offices, as well as a subsidiary court and a coroner's court.

After some discussion, the amendment was carried.

Alderman Hill, replying to questions, said the estimated cost of the extension was 30,000*l.*; the cost of the land was 32,000*l.*, but of this there would be 1,100 yards for sale, which would be worth 11,000*l.*; and from the land there would also be taken sufficient for a street 20 yards in width.



## NOTES AND COMMENTS.

It is surprising how many reforms are suggested in an English daily newspaper in the course of an autumn, and what opportunities are then available for correspondents to display their wisdom. Among other subjects, the *Times* has taken up the evils of restoration. This time the architects are discovered to be malefactors, because occasionally a memorial which records the death of a man or a woman has been removed. To read the articles and letters in the *Times*, it would appear that all the people who die in England are celebrities, and that every slab which bears a name deserves to be preserved. The clergy during many years have been in the habit of urging architects to go as far as funds will admit in restorations, but when an outcry has been raised they leave architects to bear all the responsibility. It is therefore gratifying to find that one vicar has the courage to write against the indiscriminate preservation of monuments in churches, and to express his determination to clear away with an unsparing hand the tablets which belong to a vicious and ignorant age. It is needless to say that the vicar has been rebuked by the *Times*. "Was it after all," it asks, "so vicious and so ignorant that even its memorials cannot be tolerated by its virtuous and well-informed descendants?" But why should the present age tolerate things which are simply records on stone of the vanity of the BROWNES, JONESSES, and ROBINSONS of the past? Those people were, if we believe the inscriptions, paragons of all the virtues, but that is no reason why a church should be degraded by preserving the records of their goodness. Let their descendants and admirers collect the tablets and make a museum of them; but as the majority of men are fated to be forgotten, it is not the office of a church to oppose the inevitable.

THIS year the number of works forwarded to South Kensington for examination from the 201 art schools of the United Kingdom amounted to 255,365. From them the examiners selected 1,410 to enter into the national competition. Birmingham has obtained sixteen medals; Lambeth, fourteen; Glasgow, thirteen; and South Kensington, ten. The low position generally held by the last in the national competitions is becoming remarkable. The examiners were:—Messrs. E. J. POYNTER, R.A.; GEORGE LESLIE, R.A.; W. F. YEAMES, R.A.; J. E. BOEHM, R.A.; H. S. MARKS, R.A.; HAMO THORNYCROFT, A.R.A.; GEORGE AITCHISON, A.R.A.; WILLIAM MORRIS, WALTER CRANE, J. J. STEVENSON, Professor W. C. UNWIN, ALLAN S. COLE, T. ARMSTRONG, Director for Art; and H. A. BOWLER, Assistant-Director for Art.

THE Metropolitan Public Garden, Boulevard, and Playground Association, of which Lord BRABAZON, an Irish peer, is chairman, has, during the three years of its existence, accomplished a large amount of useful work in London. If it did nothing else, it would be entitled to gratitude for having improved a few of the disused London churchyards. St. John's, Hoxton, and St. Mary's, Haggerston, have been transformed, and the example has been followed elsewhere. The association has obtained leases of the garden of Ebury Square, Canonbury Square, and of one-half of the site of Horsemonger Gaol. It has planted trees and placed seats in several thoroughfares, and has aided in the erection of gymnasia. Although London has so many philanthropic societies, there is room for one of this character which will help in beautifying some of the neglected land in London. It is not within the functions of the local authorities to undertake work of the kind, and still less is it adapted to individuals. The wiser way is for a society to become improvers, and one better managed than Lord BRABAZON's is not readily discovered.

THE vestry of St. James and St. John, Clerkenwell, is up in arms to defend itself against the aspersions of the President of the Local Government Board. If we may judge by the report of the medical officer of health, the parish is a marvellously healthy place. The rate of mortality has been during last year 16.9, while the average for London was 20.4, for the central districts 23.2, and for the east districts 24.1. It is remarkable how often officers of health are able to arrive at similar results. Sir CHARLES DILKE said "that there were fourteen house farmers in the vestry and twelve publicans, who seemed to work very much with them, and that state of things had undoubtedly led to insufficient care being taken by the vestry

of the condition of the parish." The medical officer, on the other hand, denies that these "have ever exerted an interference with the sanitary proceedings of the parish." There is, consequently, a body of twenty-six much maligned sanitary reformers in Clerkenwell. One of the proofs which are given of the zeal of the vestry is rather curious. The medical officer asks, "Does not the building of a beautiful mortuary—one of, if not the best in London—at a cost of nearly 3,000*l.*, and which is of sole use for the poor, show that the vestry are not governed by such so-called 'house-farmers and publicans' as are stated to have no feeling for the poor?" The mortuary is so beautiful a place, it has been known that a corpse was kept there for fifteen days.

AN architectural assessor is of little use apparently unless his recommendations are adopted. Yet it has happened in some recent competitions that the reports have been set aside. One of the latest is the Leeds and County Conservative Club-House Competition. Mr. GEORGE CORSON, to whom the competitive designs were referred for examination, awarded the first prize to Mr. G. B. BULMER, of the firm of Messrs. PERKIN & BULMER; the second to Messrs. CHORLEY & CONNOR; and the third to Messrs. SMITH & TWEEDALE. The directors of the Club-House Company, Limited, have, however, thought fit to award the first prize and commission to carry out the works to Messrs. SMITH & TWEEDALE, and have awarded the third prize to Mr. BULMER, who declines to accept it, as he entered into the competition under the belief and understanding that the matter would be decided by the professional adviser retained by the directors. Mr. CORSON has no less reason to complain. It would appear to be the duty of an architect who is asked to report on plans to decline the office unless there is a guarantee that his recommendations will be adopted.

THE members of the newly-formed Dundee Institute of Architecture took part in the first excursion on Saturday last. It was under the guidance of the president, Mr. JAMES MACLAREN, who had prepared notes on the places to be visited. The Kirk and Castle of Dairsie were first seen. The Castle was built by Bishop LAMBERTON, the architect of St. Andrews Cathedral, and a Parliament was held within it in 1335. The Church of Dairsie was built by Archbishop SPOTTISWOODE in 1622, and presents the appearance of a hybrid between a parish church and an archiepiscopal chapel. After a visit to Ceres Church there was a stoppage at Scotstarvit, and lastly the parish kirk at Cupar was visited. The day's excursion was a success.

THE Committee of the City of Manchester Art Gallery have purchased the following pictures from the exhibition which is now open:—*The Herring Market at Sea*, by Mr. COLIN HUNTER, 84*ol.*; *Lifting Mist*, by Mr. JOSEPH KNIGHT, 225*l.*; *The Old Hall, Baddesley Clinton*, by Mr. E. F. BREWTNALL, 31*l.* 10*s.*; *May Day*, by Mr. R. CALDECOTT, 21*l.*

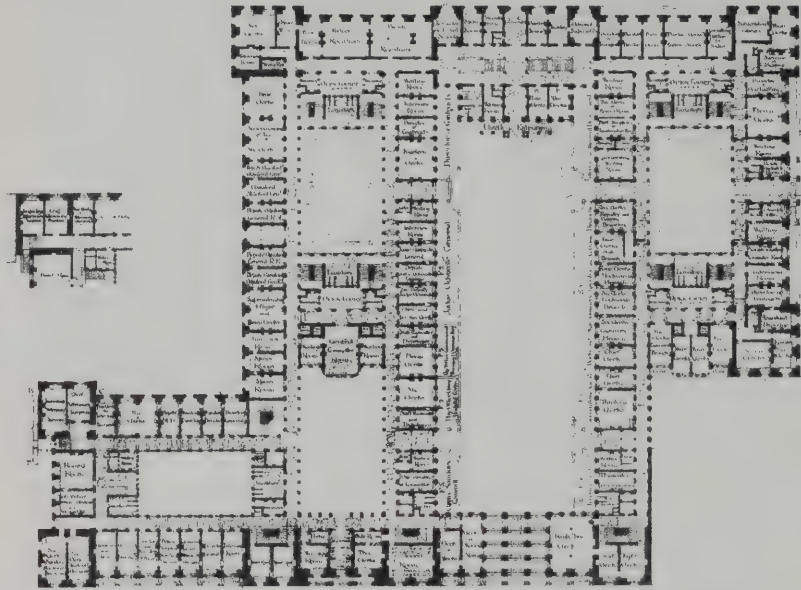
THE South Kensington Museum will shortly be enriched by the valuable collection of English pottery belonging to Lady CHARLOTTE SCHREIBER, which her ladyship intends to present to the nation when Mr. A. W. FRANKS has completed his catalogue of it. There is probably no collection more rich in examples of the rarest native manufacture. Not only the most elaborate coloured figures and groups of old Chelsea and the finest Battersea enamels, but the most curious variety of the salt-glaze wares of Staffordshire, as well as many other local fabrics, are to be found there. At present English pottery is not well represented in the museum, and the new addition will therefore be a desirable acquisition.

FIVE years ago the Corporation of Oswestry entrusted Mr. STANLEY LEIGHTON, M.P., with their records, in order that he might edit them among the papers of the Shropshire Archaeological Society. The work is now complete, and has been re-issued as a separate volume, with the following title:—"The Records of the Corporation of Oswestry, edited by Mr. STANLEY LEIGHTON, with an account of the Mayors, Stewards, Records, and Town Clerks, by Mr. ASKEW ROBERTS, reprinted from the Transactions of the Shropshire Archaeological Society." The collation and editing must have taken much time, but an excellent memorial of the town has been produced.









VIEW FROM ST. JAMES PARK.

NEW ADMIRALTY



13<sup>th</sup> 1884.



WAR OFFICES

PRINCESS MAXWELL & TILKE ARCHITECTS MANCHESTER

ARTHUR MATHIAS & CO. LONDON











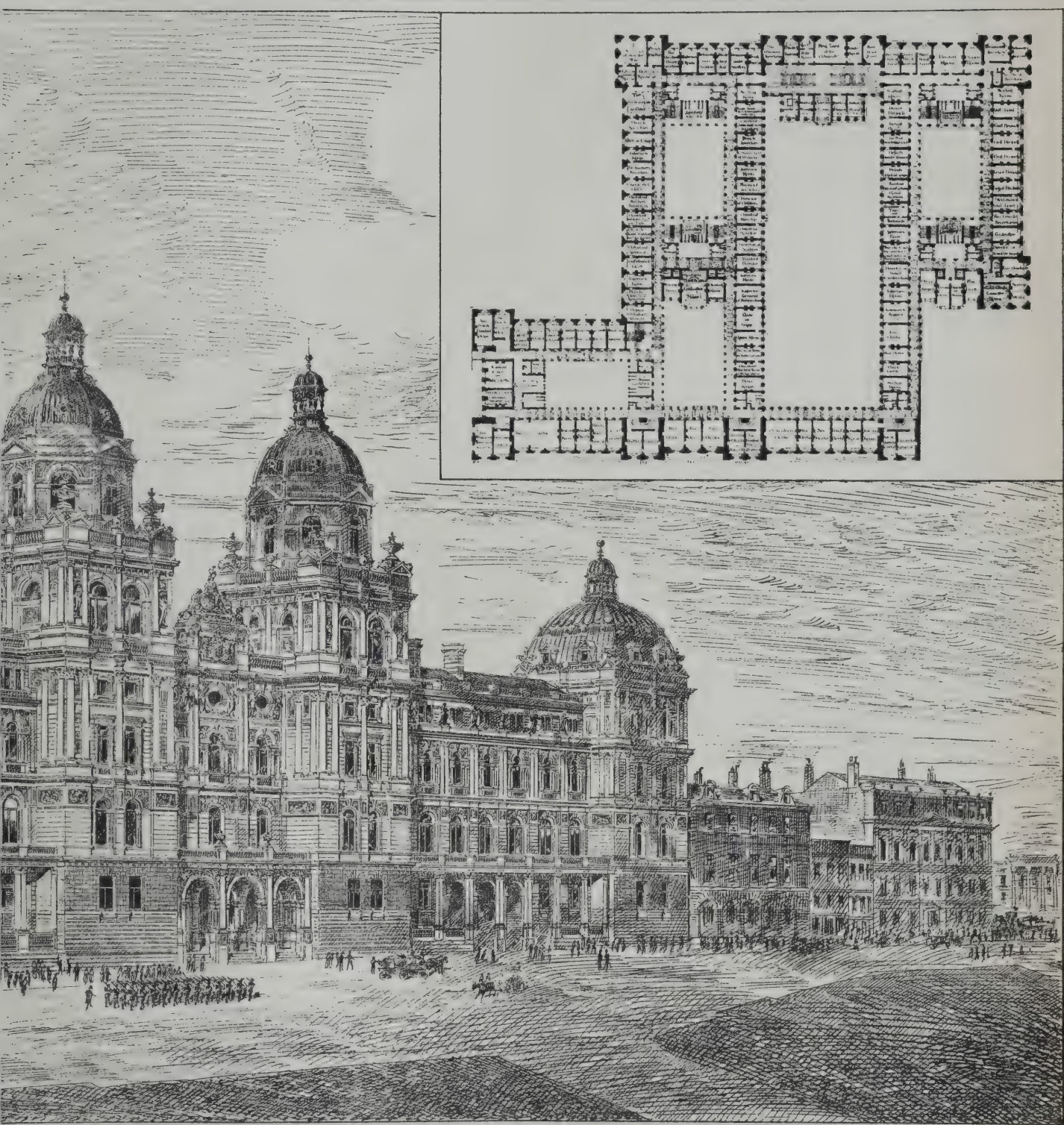


View • towards • WHITEHALL •

NEW ADMIRALTY = and =



13th 1884.



WAR OFFICES



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29 PRINCESS STREET · MANCHESTER ·







## ILLUSTRATIONS.

DESIGNS FOR THE ADMIRALTY AND WAR OFFICE.

THIS week we publish two illustrations showing the design of Messrs. MAXWELL & TUKE, and the Whitehall front designed by Messrs. GLOVER & SALTER. The former are on a smaller scale, owing to the character of the originals, which was not adapted for three-page illustrations.

## BRITISH ARCHÆOLOGICAL ASSOCIATION.

THE meeting of the Association at Tenby has given a good deal of satisfaction to the members who took part in it. The ground which was travelled over included many things which were novel to those who had not gone so far westward. The first address which followed the President's was one by Mr. George Lambert, F.S.A., on "The Origin and Use of Maces." Specimens were lent by the Corporations of Tenby, Pembroke, and Haverfordwest. He called special attention to one of the maces from Haverfordwest. It was a very old one, bearing as its date 1630 (time of Charles I.), and resembled one at Tenterden, which was the oldest known in this country. The maces on view at Tenby that day were in a most deplorable condition. The date of the Tenby maces was 1660, and it was stated on them that they had been repaired in 1737 and 1857. Mr. Lambert offered, if the mayor would allow him to take the maces, he would see that they were properly cleaned.

The town of Tenby was described by Mr. Edward Laws. It was stated that originally there were four gates to the town walls, which had been built, re-built, altered, modified, and further altered over a period of about 540 years. For about the last 230 years, however, or after the close of the wars occasioned in Cromwell's time, nothing had been done to the walls, either in building or to retard the natural consequences of increasing old age. There were nine towers left of those which originally existed, seven of them round, and two rectangular. Mr. Laws gave a *resumé* of the history of the town and the walls, and mentioned, *inter alia*, that on one occasion Tenby was well-nigh uninhabited, having been burned down by a Welsh prince. Proceeding from the hotel garden, the members wended their way to the new Baptist chapel premises, where a curious feature of the old wall was noticed in the form of small arches, which had now been filled up. Mr. Laws said he could not explain why this had been done.

Mr. Loftus Brock, F.S.A., remarked that whatever the age of the wall might be, the arches were comparatively modern. Considerable attention was bestowed upon the five-arch bastion.

The whole of the walls having been seen, the party went down round Quay Hill, and proceeded to the Museum on Castle Hill, where many local antiquarian objects had been collected. Mr. De Gray Birch described them, and first referred to the charters lying on the table, from Tenby, Haverfordwest, and Pembroke. With regard to one from Pembroke, a curious affair was pointed out. It was a charter purporting to have been granted to the town by Henry VIII., but it bore the seal of Henry III. The matter ought to be seen to by the town official at Pembroke. There was another charter to the same town granted by Edward IV. in the third year of his reign, confirming matters spoken of in previous documents. Tenby exhibited a charter granted by Edward IV., bearing date 1548, which also confirmed previous charters. It appeared that the town had petitioned the sovereign to be excused from paying tax, the corporation asserting that the town was unable to contribute. In another document, having date 1556, Elizabeth gave the lease of two windmills at a place now called Water Wynch. Tenby was spoken of in this connection as being "a decayed place." The Haverfordwest charters were more numerous than those from the other towns; but he thought the town clerk there would realise the necessity of preserving these documents in good order. Town officials were, it should be remembered, only custodians for the time being of these ancient charters, and every care should be taken that they were handed on to their successors in as good condition as possible. There was need on the part of most people to see that they were kept free from injury. They were the skins of animals, and the practice of keeping them in iron safes without ventilation was injurious. From Haverfordwest was exhibited an autograph letter sent by Oliver Cromwell, ordering the corporation to demolish the castle. The seals of Henry IV., Henry V., and Henry VI. were pointed out as being practically identical one with the other.

Mr. Edward Laws then referred to the statement of the president in his inaugural address to the effect that there were few, if any, evidences of a Roman occupation of Pembrokeshire. He showed a number of Roman coins in a glass case, which had been dug up in the neighbourhood, and some that he had personally discovered. He went on then to speak of the long barrow, which he had assisted in unearthing at Brownslade, the residence of Colonel Lambton. A collection of human skulls was found at the spot, and in making the excavations they brought up so many, said the speaker, that they almost felt ashamed

of themselves, and began to dig another pit to put them back in. In this second operation they came upon a real kistvaen, containing human bones, ox bones, sheep bones, and those of goats. They also came upon some small bronze rings, a stoop, and what was thought to be a portion of an early Christian chapel. The field was called Churchways, and an old gentleman living in the neighbourhood said he remembered the gable end of an old chapel standing there. A number of objects of interest were also shown as the result of excavations at Stackpole Warren, the site of what was supposed to be a pre-historic village. Several bronze implements were unearthed, and at one place where Lord Cawdor had been exploring there was a legend which told of a gold bedstead being in the ground. They did not, however, manage to get at the precious treasure, but human bones were found, and in the same neighbourhood there were implements of iron and of bronze, tending to show how the different ages overlapped.

A visit was next paid to the parish church of St. Mary, where the Rev. G. Huntington pointed out many features. The church is no doubt one of the most remarkable in Wales. Its dimensions are 145 feet by 80 broad, and the altar is approached by a flight of steps of such proportions and beauty as to be unsurpassed by few sacred edifices in the kingdom. The church must have grown to its present dimensions and aspect from a very small beginning, but there are, it was said, no documents giving dates. Appearances were in favour of the theory that the present building was really three churches, or portions of churches now constituting a single fabric. Notwithstanding its great size, and the fact that in the summer session they had to provide seating accommodation for about 1,800, the acoustic properties were excellent, the preacher with the greatest ease being able to make himself heard. This the rector attributed to the peculiar shape of the roof.

Mr. Loftus Brock, F.S.A., said although it differed in many respects from the majority of Pembrokeshire churches, it had, after all, a good number of the characteristics of the Welsh edifice. The church must have increased to its present proportions from very small beginnings. The town church and everything had, as they heard earlier in the evening, been burned down by a Welsh prince, and the sacred edifice had been restored afterwards. He fixed the first enlargement at probably the year 1250, as the architecture corresponded with that date, though if it were in England he would be inclined to put it one hundred and fifty years later. He endorsed the remarks of the rector as to the acoustic properties, and accounted for this excellence by the fact that the roof was not so high, in comparison with the great size of the church, as in most buildings. It would be an advantage if the example were followed in the present day.

The Bishop of St. David's thanked the rector and Mr. Brock for the very useful observations they had made.

The members of the Association and a number of visitors dined together at the public hall in the evening, the Bishop of St. David's presiding.

On the second day, the members and visitors started on an excursion to Brownslade, the seat of Colonel Lambton, for the examination of a long barrow recently opened.

Mr. Laws explained that the spot was come upon a short time ago, having previously been covered with sand. When digging began so many skulls were found that Col. Lambton and himself went to the centre of the field and proceeded to dig another place to put some of them in. Here, however, they came to a regular kistvaen, where were found the remains of a human body, evidently buried in a crouching posture, and the bones of some animals. A slab protecting the remains had a circle and a cross inscribed upon it. There were, therefore, many striking anomalies connected with the matter. Where could so many persons come from as were buried here in such a sparsely-populated district, and how were the facts to be explained that there were evidences of heathen and Christian burial in the spot, where, in addition, the bones of animals were found? About a hundred yards beyond was the foundation of what was supposed to be a small Christian chapel of great antiquity. It was discovered that both the chapel and the skeletons—one or two of the latter being almost perfect—were oriented, the bodies lying with their heads to the west and their feet to the east.

Mr. Wright said he did not think the lines on the tablet were those of a cross signifying anything connected with the Christian religion.

Sir James Picton thought they were standing on the site of a place of the greatest antiquity, and that this was one of the most important finds the Association had had.

Mr. Lambert thought the theories had not been proved.

The party afterwards visited earthworks supposed to have been used by the Britons for the repulse of the Danes. Next Castlemartin was visited for the inspection of the church and vicarage, under the guidance of the vicar, the Rev. C. Wilkinson. The site of an old castle was likewise to be looked for. The church at Castlemartin is in outline very like Manorbere, having apparently originally had a north transept and a chapel on each side of the chancel. In the porch there are certain peculiarities which have led to the opinion that a rood-loft formerly covered half of it. The stair which led to it has been diverted from its original use, and now gives access to the belfry. Considerable dignity is



given to the edifice by its massive arcade. The font is of good Norman design, and is probably older than the church, which is supposed to date from about 1180. The tower, a very remarkable one, stands on the south side, and shows signs of having been originally of the saddle-back form, and of having been altered into that which is usual in Pembrokeshire. The lines of a gable are distinctly marked on the east and west faces of the tower, in the masonry itself, so that they could not be traces of any building which stood against it. From Castlemartin the party proceeded, according to the programme, to Newton Burrows, where a cromlech, close by the high road, was to be examined and commented upon by Mr. Edward Scott. From Newton the drive was continued to the extremity of the promontory forming the southern arm of Milford Haven, and Angle was visited. The place is now celebrated for its rector, Giraldus Cambrensis, who flourished (in addition to his connection with the place) as the secretary, adviser, and travelling companion of Archbishop Baldwin, about the year 1200. Giraldus Cambrensis claimed Manorbere as the most lovely place in the whole world. It was well known, he said, that Manorbere was the most beautiful spot in Pembrokeshire, that Pembrokeshire was the most lovely district of Wales, and that Wales was the most beautiful place in the world. Therefore, he concluded, Manorbere was the most beautiful place in the world. From Angle the route lay to Rhoscrowther, where the party was received by the rector, the Rev. George H. Scott.

At the close of the second day's excursion, which included among its leading features a visit to the fine well-preserved remains of Manorbere Castle, situate on the seashore, about four miles from Tenby, and a cromlech within a mile of the same spot, and an inspection of the remains of Lamphey Palace, once the residence of the bishop of the diocese, there was an evening meeting for the reading of papers at the town hall, at which the chair was taken by Mr. Morgan, and two papers of interest were read, viz., first by Sir James Picton, and second by Mr. Laws, both on ethnological subjects connected with the district. Sir James Picton entitled his paper "Notes on Place Names in Pembrokeshire, Illustrative of its History and Ethnology." After references to the early inhabitants of the district, he said the basis of the place names of Pembrokeshire was undoubtedly Cymric. The name of the county—Penbro, the "head, or projection of land," showed this. The salient features of the county were pure Cymric, such as the Rivers Teifi, Taff, Towy, Avon, Gwaen (white or clear), the Cleddau, east and west (quiet river), and the mountains Mynydd Preseley, Moel Feddau, Bidd Arthur, Foel Erni, Marros, &c. The names of the towns, villages, and hamlets to a great extent told the same tale, the Llans, the Abers, the Pants, the Llwyns, the Rhoses, the Caers—*cum multis aliis*—commemorated the early settlers on the soil. Sir James observed that they might expect to find a similarity in the Celtic nomenclature between Pembrokeshire and Cornwall, and this was really the case. An old saw told them that

By Tre, Pol, and Pen,  
You shall know the Cornish men,

and he went on to show that the prevalence of these three appellations was quite as common in Pembrokeshire as in Cornwall, of which he gave instances. Another link of connection between the two shores of the Severn Sea was in the names of the saints to whom the early churches were dedicated, many of which were to be found nowhere else. Next, reviewing the history of Pembrokeshire with regard to its successive occupants, he came to the vexed question of the settlement of Flemings, which he briefly disposed of. In 1108, he said, to strengthen the hands of the Norman overlords, a colony of Flemings, expatriated by some political crisis in Flanders, were encouraged to settle in Pembrokeshire. They took up the same district which had been partially occupied by the kindred Norsemen two hundred years previously, and contributed to the change of nomenclature already initiated. Their range of vocabulary was not very extensive. The connection of Pembrokeshire with the conquest of Ireland was next referred to. In 1167, he said, letters patent were issued by Henry I. on behalf of Dermot MacMurrough, Prince of Leinster, who had been ejected from his kingdom, authorising all Englishmen, Normans, and Scots to go to his assistance. This was responded to by Richard de Clare, Earl of Pembroke, commonly called Strongbow. With the aid of two Pembrokeshire lords, Robert FitzStephen and Maurice Fitzgerald, a small force of picked men was raised, and the invasion of Ireland, which was to lead to such momentous consequences, was begun. Strongbow's army consisted principally of the Flemings of Pembrokeshire. At the very commencement of the war a grant was made by MacMurrough to the two Pembrokeshire chiefs of the town of Wexford, with two candreds or hundreds of land in the neighbourhood. These were occupied and settled by the Flemings of Pembrokeshire, and constitute the baronies of Forth and Bargo. Their descendants down to a very recent period kept themselves as distinct from the native Irish as the descendants of the Flemings in Pembrokeshire from the Welsh, maintaining their own language, manners, and customs.

A short discussion followed, in the course of which Mr. de Gray Buret having uttered an opinion that first impressions of the origin of places derived from surrounding circumstances were

always erroneous, Sir J. Picton and other speakers protested against such "sweeping views," the latter asking did not Newton indicate new town, Oldbury an old one, and was not Westminster named after its minster? To this Mr. de Buret pointed to Cambridge—apparently derived from the river Cam and a bridge—whereas Cambridge was not the original name of the place, but Granta, and they could not find Cambridge on old documents further back than the fifteenth century. In discussing the origin of the name of Tenby the absence of any visitor or native well versed in Welsh was deplored.

Mr. Laws next read a paper on the "Local Ethnology."

On the third day the archaeologists, nearly one hundred in number, went by special train from Tenby to Pembroke, where, meeting the carriages provided for them, they drove through a picturesque stretch of country to the Stack Rocks, and thence to the ruined chapel of St. Govan—a holy man of the sixth century, who, tradition asserts, had a cell or hermitage amid the rocks; and incorporating which, in the thirteenth century, the date assigned to the present building by Mr. Loftus Brock, F.S.A., a chapel was erected to his memory. Continuing their drive under the guidance of Mr. Edward Laws, hon. local secretary, the party reached Bosherton Church, where they were met by the Rev. George H. Scott, who, in the absence of the vicar, the Rev. C. Morgan, through illness, described the principal objects of interest in the sacred edifice. About one o'clock Stackpole Court was reached, and, after a luncheon was partaken of, some of the ladies and gentlemen set off with Colonel and Lady Victoria Lambton to the pre-historic village on Stackpole Warren; but as no barrow had been opened for them, as had been expected, there was little or nothing for them to see. Another portion of the party, by permission of the Earl of Cawdor, who was unfortunately absent from home, inspected the library and family pictures in the house. The party proceeded to pay a passing visit to Cheriton Elidur Church, where they inspected, under the guidance of the Rev. Mr. Morgan, the fine effigy of Elidur de Stackpole, as it is assumed to be, and the interesting monuments and effigies in the Cawdor chapel, which Colonel Bramble made some remarks upon, as did also Mr. George Lambert, F.S.A., on an Elizabethan silver chalice belonging to the communion plate. The seventeenth-century tomb of Roger Lort, through whom the Stackpole property came to the Cawdor family, was also examined, as well as the interesting monument to Ranald Campbell, a promising young soldier who was unfortunately killed in Zululand by the side of Sir Evelyn Wood a few years ago. This closed a pleasant and instructive day's proceedings; and in the evening at the town hall, with the Rev. G. Huntington, the rector of Tenby, in the chair, two papers were read, one by Mr. Thomas Morgan, F.S.A., hon. treasurer of the Association, and the other by Mr. Osborn Allen, both of which gave rise to a prolonged discussion as to the want of positive evidence of the Flemings ever having been settled in South Wales.

Saturday was the first and only wet day to at all inconvenience the archaeologists, who, despite a heavy and continuous rain, did not abate in their ardour, but carried through their programme in high spirits and evident enjoyment. Gurfreston Church was first visited, and here, in the absence of the rector, Mr. Charles Lynam read an interesting paper on its history, illustrating his subject by several drawings and rubbings of inscriptions, &c., made by Miss Smith, the daughter of a former well-known and much-respected clergyman of the parish of that name. St. Florence Church, a very singular example of Norman architecture, and looking almost sepulchral from its unadorned cavernous-like arches in the transept and by the side of the chancel, was next reached, and here the ladies and gentlemen of the party listened with much interest to the Rev. E. J. S. Rudd, rector and vicar, who read a paper upon it, and the supposed causes of the name "St. Florence" being applied to the parish, and heard Mr. Loftus Brock, F.S.A., ably describe its architectural and other features. Carew Castle was the next halt of the party, and here, notwithstanding the rain, which still fell heavily, a large portion of the party examined the fine old cross outside the castle wall, with interlacings and other rich ornamentation on it, so often considered to be of Runic character, though wrongly so, as Mr. Edward Laws, the hon. local secretary afterwards explained, by reading the curious inscription on the monolith, which, he said, had been deciphered only lately by Professors Sayce and Rhys, of Oxford. At the castle the party were hospitably entertained at luncheon within the ruined chapel by Mr. Charles Allen, of Tenby, after which a full examination was made of this "smaller Kenilworth," as it was well denominated by Mr. Loftus Brock, who undertook to describe its early history and architecture, telling his auditors that it chiefly consisted of buildings of Henry VII. and Elizabeth's times, although he had been fortunate to discover that afternoon, on seeing it for the first time, evidences of Norman work in a doorway and small rooms adjoining it.

The church of the parish was next visited, and there the party were met by the Rev. J. P. Morgan, who briefly described some of its features, showing some interesting entries in the register book, dating from the sixteenth century; while Colonel Bramble made some remarks on two effigies within the chancel of rather curious armour and costume.



On the silver horn being sounded by Mr. Wright, the hon. congress secretary, the party once more mounted their carriages and were driven to Upton Castle, the seat of Mr. H. Halford Vaughan, some time Regius Professor of Modern History in Oxford, whose work on "New Renderings of Shakspeare's Tragedies" is deservedly known. This gentleman welcomed the party to his residence, and at once conducting them to the disused chapel in the grounds of the castle, read them a very exhaustive account of the famous effigy of one of the Malefant family of the time of Richard II. lying within a richly canopied tomb, and described its armour, as well as the costume of another effigy of the same date, which, with its reticulated head-dress and closely-fitting costume, having the peculiarity of a sleeve ending at the knuckles of the hand, greatly interested the ladies of the party. Mr. Vaughan then led the visitors to his library, where he showed them a goodly collection of Shakspearean literature, with the facsimiles of some of the early quarto plays, which he explained had been produced through the care and energy of Mr. Halliwell Phillips, and also a copy of Euripides, in first-rate condition, once belonging to John Milton, and having his name and manuscript annotations within it.

In the town hall, at 8.30, with the Mayor, Mr. W. H. Richards, in the chair, a paper was read by Mr. Loftus Brock F.S.A., on "Historical Evidences of the extent of the Ancient British Church," which caused an interesting discussion in which the Rev. George Huntington, Mr. Lambert, F.S.A., Mr. Morgan F.S.A., and Mr. Edward Laws took part.

In the midst of much rain, which decidedly thinned the ranks of the members and visitors, a goodly number of the archaeologists left Tenby on Monday by special train for Pembroke, and then at once proceeded from the station through the long and straggling town to the Castle, where they were met by the vicar of St. Nicholas Monkton, the Rev. David Bowyer, and others. The site of the chapel gave rise to a discussion, and Mr. Brock expressed his opinion that the real site was yet to be found under the accumulated earth, none of the existing buildings presenting any special characteristics of a chapel. The large natural covers beneath the castle and on the river-side were then referred to. The continued rain unfortunately prevented as complete a perambulation of the stronghold as could have been desired, and the party, much more quickly than they otherwise would have done, set out for the church of Monkton, on the opposite hill to the Castle. Here, under the guidance of the Rev. David Bower, they made an examination of its many singular as well as most interesting architectural features. The church of the adjoining Benedictine Priory is in ruins. It is one of the very few instances remaining of a parochial and monastic church in one building, as was proved in a case which occupied the time of a law court a few years since. It is proposed to restore this portion of the sacred edifice. At the east end of the nave is a thick wall, pierced by a round-headed arch separating the nave and the choir. It was generally thought that this wall was original, and should, if possible, be preserved. The south porch has evidently contained another of the curious porch galleries noticed on Wednesday last. These galleries have hitherto been considered to be peculiar to Somerset, and their existence here is an additional point of resemblance in the architecture of the two counties. After luncheon at the King's Arms Hotel, the party returned to Tenby by railway, well pleased with their day's most instructive doings. In the evening, at the town hall, with the Mayor of Tenby, Mr. W. H. Richards, in the chair, the closing meeting of the Congress was held, Mr. Walter de Gray Birch, F.S.A., beforehand having given an interesting account of the Tenby charters. Tuesday, Wednesday, and Thursday, as extra days, were devoted to a visit to Haverfordwest and Picton Castle, where its hospitable owner, Mr. Charles E. G. Phillips, entertained the party, and to an excursion to St. David's, where on Wednesday the Bishop, as president, received the archaeologists in the famous Gower Palæe to luncheon.

## MEDIÆVAL AND MODERN CRAFTSMANSHIP.\*

IT must be admitted that every architectural work is a work of co-operation. The very designer, be he never so original, pays his debt to this necessity in being, in some form or other, under the influence of tradition. Dead men guide his hands even when he forgets that they ever existed. Furthermore, he must get his ideas carried out by other men. No man can erect a building with his own hands. Every one of these men depends for the possibility of ever beginning his work on some one else. Each is but part of a machine; the parts may be but machines themselves, or they may be intelligent; but in either case they must work in subordination to the general body. Men so working must be influenced in their work by the conditions of life, and the man who organises the labour must make up his mind that he can only get labour of a kind which those conditions have bred. To expect

enthusiasm for good workmanship from men who for two generations have been accustomed to work slovenly would be absurd; to expect consciousness of beauty from men who for ten generations have not been allowed to produce beauty, more absurd still. The workmanship of every piece of co-operative work must belong to its period, and be characteristic of it. Thus, all architectural work must be co-operative; in all co-operative work the finished wares can be no better in quality than the lowest, simplest, or widest grade, which is also the most essential, will allow them to be, and the kind and quality of that work, the work of the ordinary handicraftsman, is determined by the social conditions under which he lives which differ most from age to age.

Let us try to see how they have differed, and glance at the results of that difference, during which inquiry we shall have much more to do with the developed Middle Ages, with the work of which our society is chiefly concerned, than with any other period.

In the Classical period industrial production was chiefly carried on by slaves, whose person and work alike belonged to their employers, and who were sustained at just such standard of life as suited the interests of the said employers. It was natural that under such circumstances industrialism should be despised; but under Greek civilisation, at least, ordinary life for the free citizens, the aristocracy, in fact, was simple; the climate was not exacting of elaborate work for the purposes of clothing and shelter; the race was yet young, vigorous, and physically beautiful. The aristocracy, therefore, freed from the necessity of rough and exhausting work by their possession of chattel slaves, and little oppressed with anxieties for their livelihood, had, in spite of the constant brawling and piracy, both inclination and leisure to cultivate the higher intellectual arts, within the limits which their natural love of the matter-of-fact and hatred of romance prescribed to them; the lesser arts meanwhile being kept in rigid, and indeed slavish, subordination to them, as was natural. Had any Athenian gentleman attempted to build a Gothic cathedral in the days of Pericles, what sort of help would he have had from slave labourers of the day, and what kind of Gothic would they have produced for him? The ideal of art established by the intellect of the Greek, with such splendid and overwhelming success, lasted throughout the whole period also, in spite of the invention and use of the arch in architecture, or rather in building; and side by side with it chattel slavery, under somewhat changed conditions, produced the ordinary wants of life. The intellectual arts of Classical times had, even in Pliny's days, long fallen from their zenith, and had to wade through weary centuries of academicalism, from which they were at last redeemed by no recurrence of individual genius to the earlier and human period, but by the break-up of Classical society itself, which involved the change of chattel slavery into serfdom or villeinage, on which the feudal system was based. In place of the system of aristocratic citizen and chattel without rights, dominated by the worship of the city, which was the ideal of Classic society, was formed a system of personal duties and rights, personal service and protection in subordination to *à priori* ideas of mankind's duties to and claims from the unseen powers of the universe. The serf was in a very different condition from the chattel slave; for, certain definite duties being performed for his lord, he was, in theory at least, at liberty to earn his living as he best could within the limits of his manor. This chattel, as an individual, had the hope of manumission, but collectively there was no hope for him but in the overthrow of the society founded on his subjection. The serf, on the other hand, was by the conditions of his labour forced to strive to better himself as an individual, and collectively soon began to acquire rights amidst the clashing rights of king, lord, and burgher. Also, quite early in the Middle Ages, a new and mighty force began to germinate for the help of labour, the first signs of secular combination among free men, producers and distributors.

The guilds, whose first beginning in England dates from before the Norman Conquest, although they fully recognised the hierarchical conditions of society, and were indeed often in early times mainly religious in their aims, did not spring from ecclesiasticism. England and Denmark were the foremost countries in the development of the guilds, which took root latest and most feebly in the Latinised countries. The spirit of combination spread; the guilds, which at first had been rather benefit-societies or clubs, soon developed into bodies for the protection and freedom of commerce, and rapidly became powerful merchant guilds. In the height of their power there formed under them another set of guilds, whose object was the regulation and practice of crafts in freedom from feudal exactions. The older merchant guild resisted these newer institutions, so much so that in Germany there were bloody and desperate wars between them. In England the merchants' guilds changed in a peaceable manner, and became in the main the corporations of the town, and the craft guilds took their deputed place as regulators and protectors of all handicrafts. By the beginning of the fourteenth century, the supremacy of the craft guilds was complete, and at that period their constitution was thoroughly democratic. Mere journeymen there were none, for the apprentices were sure, as a matter of course, to take their places as masters of their craft, when they had learned it.

Let us now look at the conditions of the life of the craftsman.

\* From an address by Mr. William Morris, M.A., delivered to the Society for the Protection of Ancient Buildings.



He lived, however roughly, more easily than his successor does now. He worked for no master save the public; he made his wares from beginning to end himself, and sold them himself to the man who was going to use them. This was the case with nearly all the goods made in England, all the more so as the materials of any country were chiefly wrought into goods close to their birth-place. It followed, from the direct intercourse between the maker and the consumer of goods, that the public in general were good judges of manufactured wares, and that the art of adulteration was scarcely known. Now, as to the manner of work. There was little or no division of labour in each craft, which was some mitigation of the evil of a man being bound down to one craft life-long—some mitigation because there was plenty of variety in the work of a man who made the whole of a piece of goods himself, instead of making one little piece of a piece. The English craftsman of the fourteenth century was not the priest-ridden, down-trodden savage of whom pedant historians have written, but a thoughtful and vigorous man, and in some sense free. He worked, not for the profit of a master, but for his own livelihood, which he did not find it difficult to earn, so that he had a good deal of leisure. Being master of his tools and his material, he was not bound to turn out his work shabbily, but could afford to amuse himself by giving artistic finish. Such finish was not venal; it was given freely to the public, who paid for it by interest in and sympathy for the work itself. For all that, what are now called "the wages of genius" were much neglected by the builders of our ancient buildings; for all that, craftsmanship, as Mr. Thorold Rogers says, was widespread; the possession of some skill in it was the rule, and not the exception. Those who could afford to pay for a building were able to do the necessary planning and designing, obviously because they could naturally find help and harmonious intelligence among the men they had to employ. It followed from this widespread skill in the arts that those poor wretches who had skill and taste beyond their fellow-workmen, and who consequently had pleasanter work than they, had to put up with a very moderate additional wage, or with nothing additional. They could not make good the claim now preferred for that much sinned against and that much sinning company, men of genius, that the conformation of their stomachs and the make of their skin is different from other men, and that consequently they want more to eat and drink, and different raiment from their fellows.

When we hear that extra money payment is necessary under all circumstances to produce great works of art, we can appeal to the witness of those lovely works still left to us, whose unknown, unnamed creators were content to give them to the world with little more wages than their pleasure in their work and their sense of usefulness in it might give them. A body of artificers so living and so working with simple instruments, of which they were complete masters, had very great advantages for the production of architectural art, using that term in its widest sense, and that one would expect to find in their work that thoughtfulness and fertility of resource, that blended freedom and harmonious co-operation, which we actually find in that work. Nevertheless, the Mediæval workman was still compelled to work only as tradition would allow him to do. If it could ever have occurred to any man to build some new Parthenon or Erechtheum by the banks of Thames, Wharfe, or Wensum, in the fourteenth century, how far do you think his fellow-workman's skill would have been able to second his folly?

Hurrying on from this fourteenth century, we see that, although the constitution of the craft's guild was at first thoroughly democratic or fraternal, it did not long remain so. As the towns grew bigger the old craftsmen began to form a separate and privileged class in the guilds, with their acknowledged apprentices, and the journeyman made his appearance. After a while the journeymen attempted to form guilds under the master crafts, as the latter had done under the merchant guilds; but the economic condition of the time beat them, and they failed. Still, the conditions of work did not change much; the masters were checked by laws in favour of the journeymen, and wages rather rose than fell all through the fifteenth century, nor did division of labour begin till much later. Everywhere the artisan was still an artist. The beginning of the great change came with the Tudors in the first quarter of the sixteenth century, during which England, from being a country of tillage cultivated for livelihood, became a grazing country farmed for profit. He who runs may read the tale of this change, and its miseries, in the writings of Moore and Latimer. It had a very direct influence on the conditions of life and manner of work of the artisans, for the crafts were now flooded by the crowds of landless men who had nothing but the force of their bodies to live on, and were obliged to sell that force day by day, for what those would give them who certainly would not buy labour unless they could make a profit by it. The brutal rapine with which the change of religion in England was carried out, the wanton destruction of our public buildings which accompanied the stealing of our public lands, doubtless played its part in degrading what art was still possible under the new conditions of labour. But the Reformation itself was only one of the aspects of the new spirit of the time produced by great economic changes, and which dealt with art and its creator, labour, far more

completely than any series of accidents could do, however momentous they might be. The change in the condition of labour went on speedily, though there was still a good deal of domestic manufacture; the workmen in the towns got to be more dependent on their employers, more and more mere journeymen, and a great change was coming over the manner of their work. The mere collection of them into big workshops under one master in itself gave economy of space, rent, fuel, lighting, and the rest; but it was the prelude to a much greater change. Division of labour now began and rapidly gained head under the old mediæval conditions; the unit of labour was a master craftsman who knew his business from beginning to end. Such help as he had was from mere apprentices who were learning the business and were not doomed to life-long service.

With the new system of master and men came the change that the unit of production was a group, each member of which depended on every one of the others and was helpless without them. Under the division-of-labour system a man is very often condemned for the whole of his life to make the insignificant portion of an insignificant article of the market. The birth and growth of this division-of-labour system was no mere accident, was not the result and mean of some passing and inexplicable fashion which caused men to desire that kind of work which could be done by such means. It was caused by economical changes which forced men to produce no longer for a livelihood as they used to do, but for a profit. Almost all goods—all except those made in the most domestic way—had now to go through the market before they reached the user's hands. They were in fact made for sale, and not primarily for use; the art in them, as well as their mere obvious utility, was now become a marketable article, doled out according to the necessities of the capitalist, who employed both machine, workman, and designer, fettered by the needs of profit. For by this time, instead of all the workmen being artists as they once were, they were divided into workmen who were not artists and artists who were not workmen. This change was complete or nearly so by the middle of the eighteenth century. The gradual degradation of the arts from the fifteenth century to this point was steady and certain. Only among men who were more or less outside the great stream of civilisation, where life was rude and production wholly domestic, did the article retain any signs of human pleasure; elsewhere pedantry reigned supreme. The picture-painters who were wont to show us, as through windows opened by them, the longings and lives of the saints and heroes, nay, the very heavens and city of God hanging over the earthly city of their love, "were turned"—what few of them were aught else than pretentious daubers—"into courtly flatterers of ill-favoured fine ladies and stupid, supercilious lords."

As for the architectural arts, what could you expect to get of them from a set of human machines, co-operating, indeed, but only for speed and precision at reproduction, and designed for at best by pedants who despised the lives of men, and, at worst, by mechanical drudges, little better in any way than the luckless workmen! Whatever might be expected, nothing was got but that mass of foolish toys and costly ministrations to luxury and ostentation, which has since those days been most worthily continued under the name of upholstery.

Is that the end of the story of the degradation of the arts? No; there is another act to the drama, worse or better, according to whether you are contented to accept it as final, or have been stimulated to discontent, that is, hope for something better. From being reduced to a machine, the workman was pushed down from even that giddy eminence of self-respect. At the close of the eighteenth century England was a country that manufactured among other countries that manufactured. Her manufactures were still secondary to her merely country life, and were mixed up with it. In fifty years all that was changed, and England was the manufacturing country of the world, the workshop of the world. This strange and most momentous revolution was brought about by the machinery which the chances and changes of the world forced on our population. Whereas under the eighteenth-century division of the labour system, a man was compelled to labour for ever at a trifling piece of work in a base, mechanical way, under the system of the factory and almost automatic machines under which we now live, he may change his work often enough, he may be shifted from machine to machine, and scarcely know that he is producing anything at all. Under the eighteenth-century system he was reduced to a machine. It is the machine which bids him what to do on pain of death by starvation; if it please to hurry it can make him walk thirty miles a day instead of twenty miles, and send him to the workhouse if he refuses. If you inquire which is the worse off, the machine-workman of the eighteenth century or the slave to the machine of the nineteenth-century, I am bound to say that I think the former is; but the question as to which produced the better work is different and less complicated. The machine workman had to be well skilled in his contemptible task at least; the slave to the machine needs but little skill, and, as a matter of fact, his place has been taken by women and children, and what skill is needed in the work goes in the overlooking of the labours of the latter. In short, the present system of the factory and its dominating machine tends to do away with skilled labour altogether. Hence there is a strange contrast



between the craftsman of the Middle Ages and him of to-day. The mediæval man set to work in his own time, in his own house; probably made his tool, instrument, or simple machine himself, even before he began with his web or bundle of clay; what ornament there should be on the finished work he himself determined, and his mind and hand designed it and carried it out. Tradition in the concrete form of the custom of his craft guided and helped him, but otherwise he was free; and, even if he lived in a town, the field and sweet country came close up to his house, and at times he occupied himself in working in them.

But how does he who has taken his place work and live? He has to be at the factory gates by the time the bell rings, or he is fined or sent to grass—nay, not always will the factory gate open to him. There before his machine, up and down he has to follow it, day in and day out, and what thought he has must be given to something else than his work. It is as much as he can do to know what the machine is doing. Design and ornament, what has he to do with either? He may be tending a machine which is making a decent piece of work, or he may be a very small accomplice in turning out a blatant piece of knavery and imposture; for the one or the other he will get as much wages. He is lodged in a sweltering dog-hole, with miles and miles of similar dog-holes between him and the fair fields of the country, which in grim mockery is called "his." Sometimes, on holidays, he is bundled out by train to have a look at it, to be bundled into his grimy hell again in the evening.

At what period of a working-man's life, then, will you pick him up and set him to imitating the work of the free craft-guildsman of the fourteenth century, and expect him to turn out work like his in quality? Not to weaken my argument by exaggeration, I admit that though a huge quantity of would-be artistic work is done by this slave of the machine at the bidding of some market or other, the crafts relating to building have not reached that point in the industrial revolution. They are an example of my assertion that the eighteenth-century division-of-labour system still existed and worked side by side with the great factory and machine system. Yet here, too, the progress of the degradation is obvious enough, since the similar craftsmen of the eighteenth century still had lingering among them scraps of tradition from the times of art now lost; while now in those crafts the division-of-labour system has eaten deep, from the architect to the hodman, and moreover, the standard of excellence, so far from its bearing any relation to that of the free workman of the guilds, has sunk far below that of the man enslaved by division of labour in the eighteenth century, and is not a whit better than that of the shoddy-maker of the great industries.

## FOUNDATIONS IN BLUE CLAY.

AN account has been given by Mr. W. J. M'Alpine of the method employed for constructing the foundations of the New Capitol at Albany, United States. The soil was apparently equable and stable, but proved on careful examination to lack these qualities. It was also found that the earth, to a great depth under many portions of the foundations, received and parted with a considerable amount of moisture with the changing seasons. The circumstances of the case did not allow the use of piles or inverted arches; it was, therefore, necessary to spread the base of the walls over such an area as would afford the requisite sustaining power, and also to protect the clay and sand from any excess or deprivation of its natural degree of moisture, so as at all times to derive from it the same degree of support.

Although a single building, the Capitol may be considered as a collection of a dozen large ones, with great differences of elevations, and weights upon the lower walls, and yet so bonded together as to require that the pressure of each of the parts should be the same per square foot on the earth beneath. This object has been fully accomplished; and when the structure is loaded to the maximum extent of 200,000 American tons, Mr. M'Alpine believes that it will not compress the earth upon which it rests more than three-fourths of an inch, and exactly the same under every part thereof. The building measures nearly 300 feet by 400 feet on plan, and has three main storeys and a basement. The lower walls are 110 feet high, but those of the corner towers, pavilions, and main tower are of much greater height.

The ground covered by the structure sloped eastward at the rate of 1 in 25. The pit was excavated to a depth of 5 feet below the natural surface at the south-east corner, and 25 feet at the north-west corner. The excavation, together with the borings which were made in the bottom of the pit, fully exhibited the character of the earth. The lower strata (termed in the locality "blue clay," and "Albany clay") are more than 100 feet in thickness, resting upon the Hudson River argillite (a clay state), the two forming the banks of the river for 30 miles of its course. The "blue clay" contains from 60 to 90 per cent. of alumina, the remainder is fine silicious sand. It also contains many nodules of clay, highly charged with carbonate of lime in the form of rings and discs about an inch in diameter. Overlying the blue clay was a mass of earth from 1 foot to 35 feet deep, composed of the same clay mixed with sand of different degrees of fineness, in propor-

tions varying to such an extent as, when saturated, to render it in some places a semi-fluid, while in others it was nearly pure sand, and very porous. This material occurred in veins and strata, large and small, above and below the level fixed for the foundation. One of the largest of these veins of viscid earth passed diagonally across the foundation, and at a depth of 6 to 20 feet below the bottom of the pit. It was 200 feet long, and from 5 to 25 feet wide.\* Other veins and strata of less size were found extending across the bottom, and sometimes terminating in pockets in the blue clay. Borings from 10 to 30 feet deep were made in several places below the bottom of the pit, which showed the substratum to be blue clay; and a well which had been sunk close by to a depth of 100 feet was entirely in the blue clay.

The earth in its natural condition at midsummer contained from 27 to 43 per cent. of moisture. When the samples were thoroughly dried and pulverised and again fully saturated (without dripping), they absorbed from 39 to 46 per cent. of water. The blue clay ordinarily held about 40 per cent., and when dried, again absorbed about 43 per cent. It was, therefore, as a rule, completely saturated in its natural state. It was upon this kind of earth that the subsequent experiments of the supporting power of the clay were made. The pure clay, obtained by separating it from the sand, weighed 116 lbs., and the sand so separated 80 lbs., per cubic foot; but when they were again mixed in different proportions the weight of the mixture was less than the proportionate means between them. Earth taken from the same places as the samples varied from 80.5 to 101.4 lbs. per cubic foot, depending upon the proportions of the clay and sand; and these weights show, to some extent, the relative supporting power of the earth at the places from which the samples were taken.

It was originally intended to support the structure upon wooden piles, of which a considerable number had been procured before Mr. M'Alpine was entrusted with the direction of the work. Many comparatively large buildings in Albany have been supported upon wooden piles driven into the blue clay, or upon thick planks laid under the walls. In a few cases the wood used for this purpose has been found in tolerable preservation half a century after it had been buried in the blue clay; but, generally, such timber was much decayed at the end of a quarter of a century; and several heavy buildings, after having stood firm for twenty years, began to settle, and the walls to crack, in consequence of the decay of the wooden supports, and the unequal settlements therefrom. It appears that when the clay had been kept constantly moist, the wood did not materially decay in half a century; but, wherever the moisture was drawn off, the wood did not last more than twelve years. In this case, even if a wooden foundation could have been arranged so as to be kept constantly wet, it would have ultimately decayed; and its use was, therefore, inadmissible. Cast-iron piles of white iron could be relied upon for a century or more, but would also have eventually decayed.

The use of sand and concrete piles, made by boring or driving holes into the clay and filling them with these materials, was also considered. For reasons which will subsequently appear, inverted arches could only be used under a part of the structure,† and it was deemed advisable to have but one system of support. Mr. M'Alpine, therefore, finally determined upon the plan which has been executed.

In most buildings, except where spires or towers are introduced, the weight is nearly equally imposed upon the several foundation walls; but in the Capitol the main and pavilion towers are much higher and heavier than the adjacent walls. The extremely heavy fireproof floors, loaded as they will be frequently with dense crowds of people, books, &c., must necessarily carry their load to two only of the four surrounding walls, and, with some of the roofs acting in the same manner, will produce very unequal pressures upon the foundations.

The weight of the whole building and its contents when in use will be 200,000 American tons. The area of the base of the exterior and court walls, and the rear walls opposite, is about 24,000 square feet, and sustains an average of 6½ tons per square foot on the basement walls. The main tower, which weighs 30,000 tons, has an area of 2,508 square feet, equal to 12 tons per square foot upon its foundation walls. The weight on the foundation under the exterior walls of the corner towers is 47 tons per lineal foot; on the interior walls of the same towers, it is only 39 tons; and on the adjacent division walls, 23½ tons. Still greater differences in the weight on adjacent walls occur in other parts of the building, especially at the main tower, where the weight is 134 tons per lineal foot, and on the adjacent walls but 47 tons and 39 tons. Passing around the exterior walls of one quarter of the structure (the remainder being a repetition of the same-sized walls),

\* This vein was dug out and replaced with clay and sand artificially mixed, moistened, and slightly rammed in layers, so as to render it as similar to the adjacent natural material as possible.

† It was necessary to arrange to carry two-thirds of the weight upon the exterior, rear, and court walls, which are separated 120 feet on two of the fronts, and only 90 feet on the other two. Inverted arches spanning three very unequal spaces would have imposed unequal loads upon the clay beneath, and their use would have defeated the design of distributing exactly the same weight upon every part of the clay beneath the structure.



the weights to be supported per lineal foot are successively as follows:—Commencing at the main tower, 134 tons (which may possibly be increased); the adjacent walls are 47 tons per lineal foot for 60 feet; next, 44½ tons for 60 feet; next, 47 tons for 120 feet (turning the corner tower); next, 44½ tons for 60 feet; next, 67 tons for 18 feet; and next, 50 tons for 52 feet to the centre of the south or north front. On the rear of each of these walls the interior wall is loaded with 39 tons, and the division walls with 8½ to 23½ tons per lineal foot.

The exterior walls of cut granite facing, backed with rubble and brick, average 150 lbs. per cubic foot. The floors, including the iron box girders, cross beams, brick arches and covering average 24 lbs. per square foot. The possible weight of crowds of people upon the floors is taken at 100 lbs. per square foot; the snow upon the roofs, at 2 feet depth, is 12½ lbs.; and the effect of the strongest winds, which may at times be deflected perpendicularly against some of the roofs, is taken at 15 lbs. per square foot. The calculated weight which may come upon each of the walls is as follows:—On the corner towers and front foundation walls, 47 tons per lineal foot; on the main east and west front, 50 tons; on the curtains, 44½ tons; on the ventilating tower, 67 tons; on the division walls, extending upwards through four storeys, 23½ tons; on the partition walls of two storeys, 13½ tons, and of those which extend one storey high, 8½ tons per lineal foot. The main tower is designed to be of stone, except the portion immediately below the dome, which, from being so high from view, was proposed to be made of iron. If it should be of stone to the dome, that change, together with some others, would increase its weight to 36,000 tons, equal to 14½ tons per square foot at the base. Its footing stones were spread to 110 feet square, and the concrete to 125 feet square, and 5 feet thickness. The weight on the clay, with 30,000 tons, is 1·92 ton per square foot; and with 36,000 tons it would be 9·3 tons; but it was arranged for an underpinning, if necessary.

#### *The Experiments.*

For the purpose of ascertaining the sustaining power of the blue clay in its natural condition, two sets of experiments were made; in the first by pressure upon a square foot, and in the second upon a square yard, of the surface. The machine used was a mast of timber 12 inches square, held perpendicularly by guys, with a cross frame for the weights. A hole was dug, 3 feet deep, in the bottom of the blue clay foundation, 18 inches square at the top, and 14 inches at the bottom. The foot of the machine was placed in this hole, and weights from 2,754 lbs. to 23,784 lbs. were applied. Small stakes were driven into the ground, in radial lines from the centre of the hole, and the tops carefully driven to the same level; and by means of a straight-edge any change in the surface of the ground adjacent to the hole could readily be detected and measured.

There was a continued settlement of the clay under the foot of the machine as the loads were added, but no change in the surface of the adjacent ground was observed until an hour after a weight of 11,844 lbs. had been applied, when an uplift of the surrounding earth was noted, in the form of a ring with an irregular rounded surface, the contents of which, above the previous surface, measured 0·09 cubic foot, which is equivalent to a displacement of 1·09 inch of clay in depth under the foot of the machine, or equal to one-fifth of the whole settlement which had then occurred.

When the weight had reached 20,954 lbs., and had rested for half an hour upon the clay, a further protrusion was noted. The form of the ring was the same as before, but with more irregularity of surface. The highest part of the protrusion was from 12 to 15 inches from the edge of the pit, where it averaged 0·3 inch high, and sloped off outwardly to an average of 4 feet from the centre of the hole. This uplifted earth measured 0·606 cubic foot, which is equivalent to a displacement of 7·272 inches. When a weight of 23,784 lbs. had been applied, and had rested three hours on the clay the ring in the highest part averaged 0·5 inch high, in the same general form and extent as before noted. The amount of earth thus raised was 1·01 cubic foot, equivalent to a displacement of 12·12 inches under the machine.

Before the lifting of the earth surrounding the machine could have taken place, the materials first displaced from under the machine were doubtless forced among the particles of the earth adjacent to the whole, and compressed that earth to some extent; and this operation was continued until the adjacent earth had become so compacted as to cause the lifts noted in the table. Mr. M'Alpine is of opinion that the compression of the earth below the bottom of the machine continued without any considerable displacement until after a load of 4,000 or 5,000 lbs. had been applied, and that then the displaced earth found space in the adjoining earth until the load reached 7,000 or 8,000 lbs., when the uplift became visible at the surface of the ground; but that meanwhile the earth directly under the machine was continually more and more compressed in some proportion to the weight added. The small area pressed upon facilitated the escape of the material into the adjacent earth, which weighed only 300 or 400 lbs. per square foot. If the pit had been deeper, or the piston larger, there would have been less displacement.

The second set of experiments was made with the same machine, to the bottom of which was framed a strong base, 3 feet

square. The pit was sunk 2 feet deep into similar earth, and was 38 inches square both at the top and at the bottom. The stones were put on at intervals of an hour. There was no uplifting of the surrounding earth.

There was a remarkable regularity in the settlement as the load was increased, and a constant diminution of the increment as the earth became more compacted. The conclusion which Mr. M'Alpine came to was that the extreme supporting power of this earth was less than 6 tons per square foot, and that the load which might be safely imposed upon the clay was 2 tons per square foot.

For the purpose of maintaining the clay beneath the structure in the same condition of moisture, a deep puddle wall was extended entirely around the foundation, not only to exclude an excess of water, which might reach it through the veins and films of sand with considerable hydrostatic head, but also to prevent the egress of the natural moisture through similar veins. Although the puddle wall was carried up to the level of the terrace which surrounds the building, yet water might find its way along the face and down the outside of the walls, or possibly through some accidental break in the concrete floors within and surcharge the clay below. To prevent this, there was spread on the top of the clay, over the whole area enclosed, a depth of 6 inches of coarse screened gravel, the effect of which will be that under the great weight of the building any excess of water in the clay beneath will be forced into this pervious gravel, and flow off through it to the drains which encircle and traverse the foundations. The necessity for these provisions will be apparent when it is considered that many of the veins of sand extend to the surface of grounds of much greater elevation than the foundations, and that they communicate with imperfectly built street-sewers and water-pipes, while the same or other porous veins extend beneath the surface to grounds which are much lower. Through these sources the clay under some portions of the structure might be charged with water, while that under an adjacent wall might, at the same time, be drained of much of its natural moisture, and thus entirely destroy the design of a foundation which should everywhere have an equal sustaining power. It is not an absolute settlement which is to be apprehended, but a greater yielding in one place than in another.

A common practice of builders who have occasion to erect high and comparatively heavy towers and spires is to groove the lower part into the adjacent walls, so as to allow the heavier ones to slide in these grooves without breaking the bonding stones. In the present case the demands of the architect forbade the use of grooving, and hence the necessity for the above provisions.

The main walls of the building are from 5 feet to 7 feet thick where they rest upon the foundation walls, and bring upon them pressures of from six to nine tons per square foot, which had to be reduced to two tons per square foot on the clay. This was accomplished by projecting each of the footing courses beyond those immediately above them. The rule was to commence with a load of two tons per square foot upon the clay, three tons upon the top of the concrete, and generally four, five, six, or seven tons upon each succeeding course of stone. The weight on each lineal foot of the top of the foundation walls, divided by the above pressures, gives the exact width of each course of the footing stones, as shown in the table:—

Parts of the Building.	Load, per Lineal Foot.	Required Width of Courses.								Main Walls.
		Con-crete.	Courses of Footings.							
			1st.	2nd.	3rd.	4th.	5th.			
	Tons.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	
Corner towers, front . . .	47	23 6	15 8	11 9	9 4	7 10	7 4	7 0		
"    "    rear . . .	39	19 6	13 0	9 9	7 10	6 6	5 6	6 5		
Curtains, front . . .	44½	22 3	14 8	11 1	8 11	7 5	6 5	6 5		
Central fronts . . .	50	25 0	16 8	12 6	10 0	8 4	7 2	6 5		
Partitions, four storeys	23½	11 9	7 10	5 11	4 9	3 11	3 5	3 0		
"    two    "	13½	6 9	4 6	3 5	3 0	—	—	3 0		
"    one    "	8½	4 3	2 5	2 2	2 0	—	—	2 0		

The large quantity of stone required in a short time—50,000 tons in four months—compelled a resort to a great many quarries, which furnished stones of different thicknesses, and made it necessary to modify the above exact arrangement; but the principle of the distribution of the load according to the vertical strength of the stone used was maintained throughout the foundations.

It was necessary to consider how far these projections could be made without danger of breakage of the projecting part of the stone. The pressure in this case tending to break the stone is that due to the weight on the wall above it, divided by the width of the wall and multiplied by the area of the projection, and to treat that result as a load distributed on a beam supported at one end.

To distribute the weight upon the footing stone courses with certainty, the beds of the limestone and granite were dressed to close parallel joints, so that the weight of each of the upper courses should be carried out to the extremity of the next course below. The vertical joints were only required to be quarry joints, not exceeding 1 inch wide. For certainty and convenience of laying the masonry, the foundation-stones were all required to be



rectangular blocks of from 18 to 24 inches in thickness; the breadth to be at least one and a half times the thickness, and the length two and a half times the thickness. The average size of all the stones was 31 cubic feet, equal to two and a half tons, and many of them were from five to eight tons weight. In the foundations of the main tower the average weight of the granite blocks was four tons, and of the projecting blocks seven tons. The footing courses were spread out equi-distant from the lines of the centre of gravity of the imposed weight above. The exterior stones of the three lower footing courses were all headers from 4½ feet to 7 feet in length. The longitudinal bonding was made by the interior stone, and in the upper courses, where the projections were smaller, by alternate headers and stretchers of the front stone, as well as the interior. The result of this bonding will be to distribute the weight and equalise its pressure upon the clay.

The weight of the main tower was so much greater than that of the other walls, and the earth below it so much inferior, that the foundation was placed 7 feet deeper than elsewhere. With this exception, all the walls were commenced at the same level. The spaces between the main exterior, rear and division walls, and under the arches of the central court, were covered with a layer of concrete, made of screened gravel and hydraulic cement, 1 foot to 2 feet thick.

### HOUSES IN HACKNEY.

THE annual report by Dr. Tripe, the Medical Officer of Health for the Hackney district, states that during the last year sanitary work had been more actively carried on in the district than in any year since 1866. In respect to dwellings which should be dealt with under the Artisans' Dwellings Acts, several were found. Some of these the owners preferred to turn into workshops rather than put them into repair for homes; others were pulled down, and others, which Dr. Tripe did not consider in all respects suitable for dwellings, were not reported under the Acts, as he did not find overcrowding, and the occupants, if they had not these cottages, would have to dwell in model dwellings, where they would have only one room for the price they paid for two or three in the cottages. He reported some properties in the Ridley Road as the worst houses in the district, and said that if these were not speedily pulled down it would be necessary to take measures to shut them up or get them properly repaired. He expressed his strong opinion that it was most unfair to the ratepayers that (under Sir R. Cross's Act) they should be compelled to pay for property which had been allowed to get into a dilapidated state through the want of substantial repairs as in the case of these uninhabitable houses. On the whole, the inspection had been very satisfactory, and many owners had done necessary work without any notice whatever being served upon them after his meeting them and pointing out what was necessary to be done. Of course, the alterations had not converted the old houses into new ones; but as the alternative was to drive the inhabitants elsewhere, thus causing overcrowding, he deemed it better that the people should be allowed to continue in the houses, especially as most of them had lived there many years. The dwellings, he added, occupied by the lowest class of poor are not very numerous in this district, and are not wrecked to the extent that some are in the centre of London. The inspections showed that many of the better class of houses were in a very unsatisfactory state, not only as regarded the water supply, but as to the danger which existed of infection by sewer gas. The total number of houses visited under the Nuisances Removal, Sanitary, and Metropolitan Local Management Acts was 7,993, or nearly one-third of all the dwellings in the district. There were also several workrooms inspected in which there were too many workpeople employed, and notices were served on the employers to abate the overcrowding.

### BUILDING IN DUBLIN.

THE following extraordinary statement by a workman has appeared in one of the Dublin papers as an illustration of the causes which have increased the price of building in that city. If it be true, it is no wonder that the estimates for the proposed museum have exceeded the contemplated amount:—

A contractor has a building in course of erection, and he for such orders a hundred thousand of bricks from some of the brickmasters in the locality where such are made. The price of the materials ordered, at a rough summing up, amounts to 300/. Through the dishonesty of the contractor's men in charge of the works, two-thirds alone of the whole amount are delivered to the buyer, thus leaving the contractor at 100/. loss on that transaction. Here is how the fraudulent schemes are worked. The brickmasters give their carters, when leaving their brickyards, dockets or invoices of their loading, stating what amount of bricks each driver has in charge. The signing of the invoices by the builder's foreman or clerk of works stands when returned to the brickmaster as a receipt of the goods delivered. Now, the signing of the invoices is managed thus. The foreman writes his name on

all the invoices presented to him for such, whilst he is fully aware there is one of every three horseloads, to use the trade term for such, "hobbed," that is, sold and delivered to some roguish purchaser at half-price or less. Half of the money procured by this scheme of robbery must find its way into the foreman's hands. If not, the fraud must cease.

The foreman then, and his dishonest accomplices, lavish their ill-gotten coin on the procuring for themselves and others drink and the foul sources of immoral pleasures. The plunder is not retained exclusively to the foreman and carters, but generally all hands engaged at the building have their share of the booty. So far is such carried that all sober and well-inclined workmen are almost completely "boycotted" by their fellow-workers. To express yourself averse to the robbery practised is to solicit dismissal on the Saturday evening following from the hands of the man in charge. This is how our mechanics can spend more than their honest income in the fetid backways of our city. All engaged at a building must, with the rarest exception, be supplied with beer-money by traders in lime, stones, and sand, &c. If not, the trader's goods, be they ever so free of defect, will be objected to by the hodmen and their fellow-conspirators. This raising of blackmail is one reason why building is costlier in Dublin than elsewhere. The robbing of building contractors by their employes and carters of brickmasters, &c., of 33 per cent. on the principal materials used, namely, bricks, stones, sand, and lime, must undoubtedly make building more expensive in Dublin than elsewhere, as the building contractors learn from bitter experience that materials are in the total very costly affairs. So to clear themselves of destructive loss they must raise their charges to intending employers to figures which will cover all expenses and leave a margin suitable to live on. They must so be 33 per cent. higher than legally required if honestly dealt by at the hands of their employers. Take the builders of anywhere else into comparison with them, and the great difference of prices is seen immediately. Not to give too much credit to the workmen and foremen of other places for honesty, we can plainly see 20 per cent. for robbery would even leave builders a good profit on the same amount of work. A fact I will now allude to will suffice to prove the evil effects of the fraudulent schemes spoken of to native industry. In one locality within four miles of Dublin, where a few years ago a dozen of brickyards were in full swing, there are now but two. The builders found the County Dublin bricks ran very short in work (from reasons the reader is already acquainted with), and so they now send their orders across the Channel. Irish working-men, and Dublin artisans in particular, should think of that.

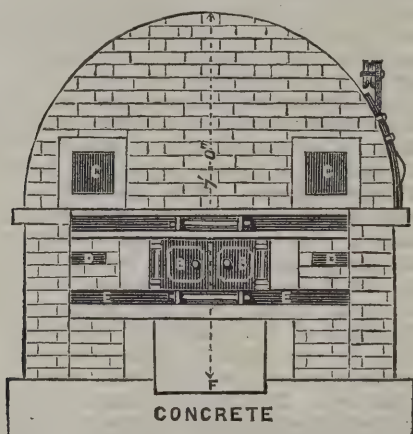
### THE DESTRUCTION OF THE REFUSE OF TOWNS.

THE accumulations of refuse matter, such as garbage from markets, ash-bins, fish offal, and that from slaughter-houses, that daily accrues in our towns has for a long time past been a source of great trouble to the authorities, owing to the difficulties of disposing of it, as well as the cost of the process. Furthermore, these daily accumulations are a standing source of danger to the health of a locality; and, as our populations are constantly increasing, the difficulties of the problem are likely to assume a progressive ratio unless a ready means is found to eradicate the nuisance. Sanitary authorities have decided that burning in a furnace at a high temperature is the best means of overcoming the difficulty, and there are apparatus now in use that have been invented for the purpose. With the exception of a very costly apparatus in use in a few of our larger and more wealthy towns, and the expense of the erection of which places it out of the reach of the many, there does not appear to have been anything until recently invented that has secured a consensus of approbation from those interested in the question. It would appear, however, that the question is now in a fair way of being satisfactorily settled. Mr. J. E. Stafford, A.M.I.C.E., the Borough Engineer of Burnley, has recently invented a furnace which he has named the "Beehive Destructor," from its appearance assimilating to that of an aparian house. It is of the simplest construction, and may be constructed anywhere at a cost of about 100/., providing that it can be set up close to a chimney-stack such as is required for a steam-engine and boiler. But if the stack is not attainable it will be necessary to erect one. We append an illustration showing a front view of the apparatus. It is simply a furnace fed with the refuse at the side by means of a door running on rollers, with a water tank underneath the furnace in front into which the ashes fall, the steam or vapour given off by the water tending to keep the bars of the furnace cool, and so prolonging their wear. One of these destructors has been in use in Burnley for some months past, where it has been burning the refuse at a cost, including all charges, of about tenpence per load. Matter of the most heterogeneous character, even to the contents of middens representing human excreta, combined with ashes, have been consumed, and not the slightest offensive smell has been given off during the process. The residuum, after burning, is very small, and mainly consists of a fine dust adapted for mixing with mortar, and a hard clinker suitable



for the underlying for roads. Although in the midst of a stone district, Mr. Stafford informs us that rubble suited for the bedding of the roads costs from 3s. 6d. to 4s. per load. It will be seen from these remarks how great has been the gain in the removal of nuisance, while the cost of scavenging in the town of Burnley, which has averaged during the past five years 1,600% per annum, has been reduced to a sum since the introduction of the destructor that the most sanguine could have scarcely anticipated.

A few days since we received a request to visit Richmond, where two of the "Beehive" destructors have been erected in the Corporation Yard at New Richmond, under the direction of Mr. Lomas, the London agent of Messrs. Bortwistle & Co., of Burnley, the makers of the apparatus. Great credit is due to the authorities of the charming Surrey town for the step they have taken, in which they have set an example to all other places within the metropolitan area that they may follow with economy and advantage. A fine stack some 90 feet high has been erected, having a square base, and at the opposite ends two destructors have been erected, our illustration showing the front view. It is 7 feet in diameter and 7 feet high, built entirely of fire-brick, and the bricks composing the stack have all been sent from Burnley, Mr. Lomas not having been able to obtain bricks in London suitable to the purpose.



Some astonishment was created at Richmond by the manner in which the stack was erected, being built by the workmen sent from the north from the inside, without scaffolding—a thing almost unknown south of the Midland district. We have now only to add that the destructors are doing their work at Richmond to the satisfaction of the authorities, and to the evident advantage of the neighbourhood. Considering the price of coal at Richmond and the cost of labour in the metropolitan area, we cannot expect the economic feature to come out quite so advantageously as in northern towns, where both fuel and labour are so much cheaper. But if we look at the corresponding cost under the old system, the advantages are in proportion; and sufficient is already known to warrant the authorities in saying that they have entered upon a wise and economical undertaking. We may add that the entire cost of the work has not exceeded 450%, and that if other two destructors are eventually required to fill up the square they will be erected at about 100% each.



#### Correspondence

**New Cathedral, Liverpool.**  
SIR,—When the advertisement inviting members of the profession to send in portfolios of designs first appeared in your paper, it was, I think, very generally felt that the committee for the proposed cathedral were honestly seeking the best means of stirring up and bringing to the front some of the genius of the profession, which no one can doubt lies beneath the mere surface of opportunity and success. This feeling was further encouraged from the fact that the most representative member of the profession, "the President of the Institute," was selected as "consulting architect" to the committee. But what are the results of this new and well-intentioned method of competition? Surely they are far from satisfactory. In the very short notice giving the result of this important competition, we are told that out of the one hundred and one architects who sent in portfolios, Mr. Ewan Christian recommended twelve names for the consideration of the committee, a number which, it must be allowed, is very fairly proportionate. The committee, however, only select four gentlemen to supply "sketch designs" out of the twelve recommended. No one can, of course, question the thorough ability of the four gentlemen thus selected, whose names have been, for so many years familiar to those interested in ecclesiastical art; but surely in a work of

such great importance it would not be too much to ask that the twelve, or a majority of the twelve, architects recommended should have been invited to send in "sketch designs." This, however, seems to have been a far too liberal course for the very liberal cathedral committee, who have contented themselves with returning the portfolios "unpaid" to their owners, accompanied with a printed form of thanks, but without giving any intimation as to the names of the twelve architects recommended or the general result. In common justice to the eight unnamed architects, who had the honour of being recommended by Mr. Christian, and for the benefit of the profession in general, I do hope that those names will be duly announced.

The recommendation, coming as it does from an eminent member of the profession, is of consequence to all concerned. The final selection made by an amateur committee surprises no one, as the names chosen are naturally names that are well known to all. No one will, I think, complain of the names selected; but many will feel, under the circumstances, that more than double the number should have been invited to send in "sketch designs."

September 9, 1884.

Yours truly,  
SUUM CUIQUE.

#### GENERAL.

**Mr. A. W. Turner**, second master in the Derby School of Art, has been appointed head master to the York School of Art.

**An Art and Industrial Exhibition** will be opened at Newbury on Monday next.

**A Memorial Pulpit**, designed by Mr. Chatwin, of Birmingham, has been presented to Aston Church by Mr. J. Yates, of that town.

**Mr. James Lessels** has been appointed architect to the Edinburgh Improvement Trust, in succession to his late father.

**Mr. W. S. Allen, M.P.**, has offered a site to the Corporation of Newcastle-under-Lyme for the proposed new baths and free library, for the sum of 1,400%, which is equivalent to a gift of 500% to the undertaking.

**A Piscina** has been discovered during the removal of the south gallery in the Manchester Cathedral, in that portion of the edifice known as the Trafford Chapel. Its existence had not previously been suspected, for it was covered entirely by a thick coating of plaster.

**A New West Window** for Ripon Minster has been decided on as a memorial of the late Bishop of Ripon.

**Mr. G. Gibbons**, of Bath, has obtained a bronze medal and honourable mention for plans of farm buildings exhibited at the Amsterdam Exhibition.

**Application has been made** to the First Commissioner of Her Majesty's Works for the loan of the drawings which were submitted in the second competition for the new Admiralty and War Office buildings, for the purpose of placing them on view for a short time in the Edinburgh Museum of Science and Art.

**Funds are to be raised** immediately for the erection of a new church for Fairfield parish, Buxton.

**The Paisley Town Council** on Tuesday decided to delay the consideration of proposals regarding the site of the new municipal buildings, and in the meantime to instruct the measurer to fill up the schedules of the cost of the buildings.

**The Teddington Local Board** have decided on the desirability of constructing a bridge over the Thames at Teddington, and so opening one of the finest promenades on the Surrey side of the river to the public generally.

**The Trades Union Committee**, in the report which was read at Aberdeen, express regret that so little progress was made with the Employers' Liability Amendment Act. They have increasing evidence of the necessity of preventing employers contracting out of the Act of 1880. As showing the working of this Act, they state that 343 actions were brought in county courts last year. Damages were obtained in 116 cases, the total sum being 9,242%, and the average 79%. Fifty cases were withdrawn and settled out of court.

**The American Elevator Co.**, of 38 Old Jewry, E.C., have just received the contract for one of their "Standard" hydraulic lifts for passenger service, and especially for the use of invalids, to be erected in the London Temperance Hospital, Hampstead Road. The car will be so constructed as to admit a cot bed containing a patient, thus enabling the inmates of the hospital to be moved from place to place with great facility.

**Penally.**—The ancient church of Penally, so well known to holiday visitors to Tenby, has been reopened after restoration of the interior. The floor has been laid with encaustic tiles, and the whole series of six windows have been filled with stained glass. The east window, which was in very bad condition, has also been restored, and the church lighted with the Hesperus lamp, the whole of the work having been carried out satisfactorily by Messrs. Jones & Willis, of Birmingham and London.









DESIGN FOR ADMIRALTY & WAR OFFICES

[ WHITEHALL FRONT ]

BY MESSRS GLOVER & SALTER



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, SEPTEMBER 13, 1884.

### COMPETITIONS OPEN.

**BIDEFORD.**—Sept. 22.—The Trustees of the Bideford Bridge Trust invite Competitive Designs for the Erection of a Block of Buildings suitable for a Post Office on site of Premises in High Street. Premiums of 20*l*. and 10*l*. The cost of carrying out any of the Designs not to exceed 800*l*.

**BOMBAY.**—Nov. 6.—The Municipal Commissioner of Bombay invites Designs and Estimates for a New Municipal Hall and Offices, which must be sent to his Office by Twelve noon, on Nov. 6. A Premium of 5,000 rs. will be given for the Design most approved of by the Commissioner, with the assistance of a Committee of the Corporation; 3,000 rs. for the second, and 2,000 rs. for the third. The total cost of the buildings is not to exceed 5 lacs (5,00,000 rs.). Mr. E. C. K. Oliviant, Municipal Commissioner's Office, Bombay, or at Messrs. E. W. & R. Oliver, 1 Corbet Court, Gracechurch Street, London.

**REDRUTH (CORNWALL).**—Sept. 13.—*School.*—The Redruth School Board offer a Premium of 25*l*. for the best Plans (Elevation and Detailed Drawings), to be selected by themselves, for a School, to be erected at Trewirgie, Redruth, to accommodate 700 Children (350 Boys and 350 Girls and Infants). Total cost not to exceed 3,500*l*. Mr. Charles Bawden, Clerk, Heanton Place, Redruth.

**STOCKPORT.**—Oct. 1.—Designs are invited for Public Baths. Premiums of £50, £30, and £20. Mr. Walter Hyde, Town Clerk, Stockport.

### CONTRACTS OPEN.

**AIRDRIE.**—Sept. 22.—For Erection of Railway Station Buildings. Mr. John Strain, C.E., 154 West George Street, Glasgow.

**AYR.**—Sept. 15.—For Construction of Section of Tramway from Ayr to Prestwick. Mr. J. Macrae, C.E., 107 Prince's Street, Edinburgh.

**BELFAST.**—Sept. 16.—For Building Boiler-house, Coal-house, &c., at the Workhouse Infirmary. Mr. J. C. Neeson, Union Workhouse, Belfast.

**BLYTH.**—Sept. 27.—For Restoration of Church. Mr. C. Hodgson Fowler, Architect, The College, Durham.

**BROXWOOD.**—For Building Small Church and Presbytery. Mr. C. F. Hansom, Architect, Clifton, Bristol.

**BURY.**—Sept. 15.—For Building Woollen Mill at Hudear. Messrs. Sellars & Hamilton, Architects, Union Chambers, Bury.

**CATERHAM.**—Sept. 18.—For Stone Stair and other Builder's Work. Mr. W. Crickmay, Resident Engineer, Caterham Asylum for Imbeciles.

**CLEGGAN.**—Sept. 24.—For Construction of Basin, Wharves, Groin, Extension of Pier, Deepening Harbour, &c. Mr. W. B. Soady, Secretary, Office of Public Works, Dublin.

**DARLINGTON.**—Sept. 29.—For Building Board Schools in Beaumont Street. Mr. F. W. Brooks, Architect, 40 High Row, Darlington.

**DEWSBURY.**—Sept. 15.—For Building Five Houses, Savile Town. Mr. H. Holton, Architect, Bond Street, Dewsbury.

**EDMONTON.**—Sept. 15.—For Building Six or Twelve Houses. Messrs. Whitmore & Reeves, Architects, 14 Devonshire Square, Bishopsgate, E.C.

**FENTON.**—Sept. 20.—For Building Twelve Houses and Shop. Messrs. R. Scrivener & Sons, Architects, Howard Place, Hanley.

**FORMBY.**—For Building Villa Residences. Messrs. Andrews & Titmas, Architects, 48 Arcade Chambers, St. Mary's Gate, Manchester.

**GLASS.**—Sept. 13.—For Building Dwelling-house. Messrs. Matthews & Mackenzie, Architects, 255 Union Street, Aberdeen.

**GORLESTON.**—Sept. 17.—For Building House and Shop. Mr. W. B. Cockrill, Architect, Glencoe House, Gorleston.

**HALIFAX.**—Sept. 15.—For Building Four Cottages and Additions to House, Booth Town. Messrs. Utley & Gray, Architects, Waterhouse Street, Halifax.

**HAMMERSMITH.**—Oct. 2.—For Rebuilding Superstructure and Strengthening Hammersmith Bridge, Construction of Temporary Bridge, &c. Sir J. W. Bazillette, Spring Gardens, S.W.

**INVERURIE.**—Sept. 13.—For Erection of Buildings at Inverurie Mills. Messrs. Jenkins & Marr, Architects, 16 Bridge Street, Aberdeen.

**IPSWICH.**—Sept. 16.—For Building Beard School for Infants, Rose Hill. Mr. E. F. Bisshopp, Architect, Museum Street, Ipswich.

**KIRKSTALL.**—Sept. 20.—For Stone Boundary Wall, Entrance Gateways, Piers, and Iron Gates to Burial Ground. Mr. T. Winn, Architect, 18 Park Lane, Leeds.

**KNOCKADOON.**—Sept. 17.—For Construction of Boat Slip and Platform, Rock Excavation, &c. Office of Public Works, Dublin.

**LEEDS.**—For Building Two Houses. Mr. D. Dodgson, Architect, 18 Park Row, Leeds.

**LEE.**—Sept. 25.—For Construction of Brick Sewer (4,200 feet), Grove Park. Metropolitan Board of Works, Spring Gardens, S.W.

**LIMERICK.**—Sept. 22.—For Building the St. Vincent of Paul National School. Messrs. Nash & Son, Land Agents, 85 George Street, Limerick.

**MANSFIELD.**—Sept. 15.—For Building Detached Cottage, Nottingham Road. Mr. R. Frank Vallance, Architect, Mansfield and Nottingham.

**MATBOLE.**—Sept. 16.—For Construction of Sewers. Mr. R. C. Brebner, C.E., 122 George Street, Edinburgh.

**NEWCASTLE-ON-TYNE.**—Sept. 30.—For Clearing Site and Building Offices for the Tyne Improvement Commissioners. Mr. J. J. Stevenson, 18 Queen's Road, Bayswater, W.

**PERTH.**—Sept. 26.—For Enlargement of the General Station. Messrs. Blyth & Cunningham, C.E., 135 George Street, Edinburgh.

**STRATFORD.**—Sept. 23.—For Building Police Court and Offices. Mr. Lewis Angell, C.E., Town Hall, Stratford, E.

**STROUD.**—Sept. 20.—For Building Post-Office. H.M. Office of Works, 12 Whitehall Place, S.W.

**SWANSEA.**—Sept. 16.—For Additions to Tirdewnaw School. Mr. E. Sidney Hartland, Clerk to the School Board, 5 Rutland Street, Swansea.

**TODMORDEN.**—Sept. 26.—For Construction of Reservoir, Ramsden Clough. Mr. James Farrar, C.E., Market Street, Bury.

### TENDERS.

#### ABERDEEN.

For Building Two Houses in Grosvenor Place, Aberdeen. Messrs. ELIAS & WILSON, Architects. Quantities by the Architects.

Smith, mason.  
Murray & Co., carpenter.  
Wilson, slater.  
Mason & Findlay, plasterer.  
Matthews, plumber, gasfitter, &c.  
Whyte, painter and glazier.

#### BURGESS HILL.

For Alterations, &c., at Abbotsford, Burgess Hill, Sussex. Mr. ARTHUR LOADER, Architect, Brighton.

Lockyer, Brighton	£313	0	0
Norman, Burgess Hill	276	0	0
WILSON, Brighton (accepted)	259	0	0
Water-Supply.			
Norman	149	0	0

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

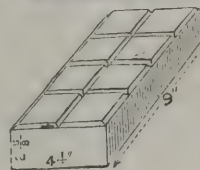
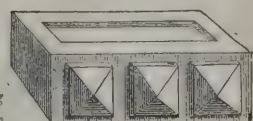
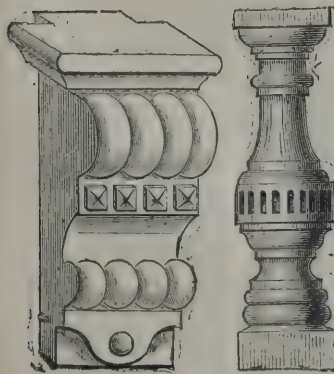
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Pattern Sheets and Price Lists of superior Glazed Stoneware Sanitary Pipes, and Fire Clay Goods, Chimney Tops, &c., on application.

Sole Manufacturers:—CANDY & CO., Limited, GREAT WESTERN POTTERIES, NEWTON ABBOT, AND 11 QUEEN VICTORIA STREET, LONDON, E.C. Who are also Sole Makers of the celebrated "Granite Vitrified" Paving Bricks for Yards, Stables, and Footpaths, and "Granite Vitrified" Damp-proof Building Bricks, as used by H.M. Government for dock construction, &c. Samples free to Architects and Engineers.





## AUDENSHAW.

For Gate Piers, Boundary Walling, Tool Shed, Closet, and Fixing Palisades, for St. Stephen's Church, Audenshaw. Mr. J. H. BURTON, Architect, Ashton-under-Lyne.	
Fielding, Dryolsden . . . . .	£617 13 4
Kinder, Hooley Hill . . . . .	605 18 1
Cordingley & Stopford, Manchester . . . . .	559 0 0
S & W. M. Chadwick, Ashton-under-Lyne . . . . .	554 0 0
Crackston, Ashton-under-Lyne . . . . .	527 6 0
CARSHAW, BARNES & Co., Stalybridge (accepted) . . . . .	483 10 0
Hirst, Haughton . . . . .	462 19 0
Woodhead, Ashton-under-Lyne . . . . .	419 14 7

## BELFAST.

For Supply of 1,262 tons of Cast-iron Pipes, ranging from 4 to 12 inches in diameter.	
Stanton Ironworks Co., Nottingham . . . . .	£7,166 12 6
J. & T. Roberts, West Bromwich . . . . .	8,849 3 8
Stewart & Co., Glasgow . . . . .	6,832 1 4
Cochrane & Co., Dudley . . . . .	6,732 0 8
McFarlane, Strang & Co., Glasgow . . . . .	6,696 6 0
McLaren & Co., Glasgow . . . . .	6,632 14 5
Spittle (Limited), Newport . . . . .	6,644 0 5
Edington & Sons, Glasgow . . . . .	6,639 14 3
LAIDLAW & SON, Glasgow (accepted) . . . . .	6,598 8 0

## BRIGHTON.

For New Front to 46 Preston Street, Brighton. Mr. ARTHUR LOADER, Architect, Brighton.	
Kemp . . . . .	£320 0 0
Hackman . . . . .	254 10 0
Taylor . . . . .	210 0 0
LOCKYER (accepted) . . . . .	236 0 0
For Sinking Well, Building Engine House and Coal Store, Fixing Engine and Pump, at Pumping Station, Patcham, Brighton. Mr. EDWARD EASTON, C.E., Engineer, 11 Delahay Street, S.W. Quantities by Mr. B. H. Nunn, Queen's Road, Brighton.	
Tilley & Sons, London . . . . .	£1,030 10 0
Taylor, Reigate . . . . .	976 0 0
Brown, Tottenham . . . . .	855 0 0
Longley, Crawley . . . . .	629 0 0
HARRISON (accepted) . . . . .	570 0 0
Engine House, Engine, &c. . . . .	
REED & SON (accepted) . . . . .	2,125 0 0

## BURTON-ON-TRENT.

For Pipe Laying in connection with the Sewerage Works, Burton-on-Trent.	
McKAY, Stoke (accepted) . . . . .	£4,738 8 9

## CARDIFF.

For Erecting New Galleries to the English Baptist Chapel, Longcross Street, Cardiff. Mr. J. P. JONES, Architect, 27 Park Street, Cardiff.	
Shepston & Sons . . . . .	£615 16 0
Gray . . . . .	457 0 0
Thomas & James . . . . .	450 0 0
Jones Bros. . . . .	445 0 0
Lock (accepted) . . . . .	421 0 0
Bridgeman . . . . .	390 0 0

## CARSHALTON.

For Billiard Room for Mr. J. H. Davis, Cressingham House, Carshalton, Surrey. Mr. THOS. L. HEWARD, Architect, 7 John Street, Bedford Row, W.C.	
Howe & White, Wallington . . . . .	£370 0 0
Potter, Sutton . . . . .	333 0 0
Smith & Bence, London . . . . .	347 0 0
Hazell, Beddington . . . . .	350 0 0
Evans, Carshalton . . . . .	309 0 0
Clarke, Wallington . . . . .	298 0 0
ALDOUS, Carshalton (accepted) . . . . .	250 19 0

## COLCHESTER.

For Erection of Fourteen Cottages, Colchester. Mr. F. E. MORRIS, Architect, West Stockwell Street.	
Everett & Son, Colchester . . . . .	£1,680 0 0
Eade & Leaden . . . . .	1,439 0 0
Smith, Wyvenhoe . . . . .	1,369 0 0
Shepherd, Colchester . . . . .	1,358 0 0
Gladwell, Colchester . . . . .	1,358 0 0
AMBROSE, Colchester (accepted) . . . . .	1,314 0 0

## CORK.

For Building Twenty Houses, for the Cork Villa and House Company. Mr. ROBERT WALKER, Architect, 17 South Mall, Cork. Quantities supplied.	
Martin . . . . .	£9,091 8 0
Roberts . . . . .	8,800 0 0
T. O'Flynn . . . . .	8,746 5 5
Fitzgerald . . . . .	8,256 0 0
E. & P. O'Flynn . . . . .	8,235 0 0
Hill . . . . .	7,825 0 0
DELANEY (accepted) . . . . .	7,786 0 0

## CROYDON.

For Works at the Church of St. Mary Magdalene, Croydon. Mr. D. R. DALE, F.R.I.B.A., Architect.	
HOARE & SONS (accepted) . . . . .	

## ERLES COURT.

For Erection of Farm Buildings, Erles Court Farm, Wiltshire. Messrs ARUNDELL & TARTER, Architects, 30 Great James Street, Bedford Row, W.C.			
	Estimate A.	Estimate B	
Sindall, Cambridge . . . . .	£679 11 10	£496 1 10	
Barrett, Swindon . . . . .	637 2 2	458 1 10	
Wheeler, Swindon . . . . .	605 13 10	417 5 3	
Colborne, Stratton . . . . .	569 5 0	409 10 0	
Beaven, Bristol . . . . .	560 0 0	395 0 0	
Looker, Stratton . . . . .	511 0 0	385 0 0	
Johnson & Manners, London . . . . .	466 0 0	357 0 0	
Estimate A. New Buildings.			
„ B. Cottages.			

## ESHOLT.

For the Erection of a Residence at Esholt, near Shipley, Yorks, for Mr. Jonathan Barker. Mr. R. F. ROGERSON, Architect, Brighouse.	
Accepted Tenders.	
Cordingley, Thackley, Idle, mason . . . . .	£170 0 0
Deacon, Shipley, joiner . . . . .	150 0 0
Rushworth, jun., Shipley, plumber, &c. . . . .	53 0 0
Wright, Otley, slater . . . . .	86 10 0
A. & S. Wheatear, Calverley, plasterer . . . . .	30 0 0

## EDINBURGH.

For Sewerage Works, Comely Gardens, Edinburgh. BOWDEN (accepted) . . . . .	£612 19 2
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## FLEETWOOD.

For New Business Premises, East Street, Fleetwood, for Mr. H. J. Rowton, Draper and Outfitter. Mr. C. PEARSON SHAW, Architect. Quantities by the Architect.	
Jackson, Fleetwood, excavator, drainer, and bricksetter . . . . .	£613 3 5
Rosson, Blackpool, carpenter, &c., ironwork, and ironfounder . . . . .	910 0 0
Johnson, Fleetwood, mason and flagger . . . . .	652 9 9
Seed, Poulton, slater . . . . .	68 0 0
Whiteside & Walmsley, Blackpool, plasterer . . . . .	103 0 0
Coulston, Blackpool, plumber, glazier, painter, hot-water engineer, gasfitter, and bellhanger . . . . .	425 0 0
Total . . . . .	£2,185 6 2

## FRITTENDEN.

For New Wing to House and New Oast Houses, Frittenden, Kent. Mr. ARTHUR LOADER, Architect, Brighton.	
BAKER & HADLEY (accepted) . . . . .	£4,720 0 0
* At Architect's price.	

## HALIFAX.

For Laying 10-inch Water Pipes (1,300 yards), from Booth Town to Claremont, Halifax.	
BROOK & SON (accepted) . . . . .	£162 10 0

## HEREFORD.

For Reconstructing Premises, Hereford, recently Destroyed by Fire, for Mr. James Morzan. Messrs. WILLETT & WAKELING, Architects, Hereford.	
Welsh . . . . .	£600 0 0
Davis . . . . .	592 0 0
Pritchard . . . . .	577 0 0
Lloyd . . . . .	562 0 0
Rowberry . . . . .	548 0 0
Taylor . . . . .	542 0 0
Powell . . . . .	506 0 0
Bower & Co. . . . .	478 0 0
Gardner & Co. . . . .	420 0 0
DANIELS . . . . .	374 0 0
* Accepted subject to variations and omissions.	

For Offices and Soup Kitchen in Bath Street, Hereford. Messrs. WILLETT & WAKELING, Architects.	
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Welsh . . . . .	£342 0 0
Colley . . . . .	915 0 0
Daniels . . . . .	843 0 0
Powell . . . . .	816 0 0
Bowers & Co. . . . .	750 0 0
Gardner & Co. . . . .	750 0 0
Ford . . . . .	700 0 0
PRITCHARD (accepted) . . . . .	659 16 0

## HITCHIN.

For the Erection of Two Houses at Hitchin, for Mr. Wm. Ransom. Mr. J. SHILLOCK, Architect. Quantities by Mr. Henry Lovegrove, 26 Budge Row, E.C.	
Ransom . . . . .	£2,967 0 0
Twelvetees . . . . .	2,869 0 0
W. & A. Cox . . . . .	2,764 0 0
Butterfield . . . . .	2,730 0 0
Redhouse . . . . .	2,632 0 0
Warner . . . . .	2,690 0 0
Seymour . . . . .	2,646 0 0
Warren & Bates . . . . .	2,635 0 0
Jeeves & Sons . . . . .	2,622 0 0
Willmott . . . . .	2,620 0 0
Stapleton . . . . .	2,593 0 0
Brockett . . . . .	2,500 0 0

## KENDAL.

For Pulling Down and Re-erection of Three Dwelling-houses in Chapel Lane, Kendal, for Mr. H. Pickthall, Manchester. Mr. JOHN STALKER, Architect, Kendal. Quantities by the Architect.	
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## Accepted Tenders.

Gibson, excavating, walling, and mason-work and slating . . . . .	£178 0 0
Stables, carpenter and joiner . . . . .	117 0 0
Jackson, plumbing, glazing, and painting . . . . .	34 9 6
Hoskinson, plastering . . . . .	34 5 0
Total . . . . .	£363 14 6

## LISMORE.

For Completion of Church Chancel, Chapels, &c., Lismore, co. Waterford. Mr. W. G. DOOLIN, M.A., Architect, 20 Ely Place, Dublin. Quantities by Mr. H. McConnell.	
Hammond, Drogheda . . . . .	£6,200 0 0
CRUDON, Fermoy (accepted) . . . . .	1,757 0 0
Architect's pricing . . . . .	1,459 0 0
Surveyor's pricing . . . . .	1,486 0 0

## LONDON.

For the Erection of 35 Cottages on the Shacklewell Estate. Mr. D. R. DALE, F.R.I.B.A., Architect.	
DALES, Thornton Heath (accepted) . . . . .	£7,525 0 0
For various Works at the Church of St. Mary, Spital Square, E.C. Mr. D. R. DALE, F.R.I.B.A., Architect.	
Smith . . . . .	£579 0 0
Brady . . . . .	548 0 0
Pritchard . . . . .	500 0 0
Kiddle . . . . .	455 0 0
Hoare & Sons . . . . .	434 0 0
For Building Nine Houses, Cedars Road, Stratford, E., for Mr. W. Bigg.	
Curnow . . . . .	£2,924 0 0
Castle & Son . . . . .	2,695 0 0
Boutter & Lee . . . . .	2,473 0 0
Baxter . . . . .	2,412 0 0
Brickell . . . . .	2,250 0 0
Saunders & Co. . . . .	2,241 0 0
Ellis . . . . .	2,175 0 0
Rogers . . . . .	2,115 0 0
Smith . . . . .	2,115 0 0
Watson . . . . .	2,070 0 0
England & Thompson . . . . .	2,070 0 0
Thompson & Tweed . . . . .	2,043 0 0

## LONDON—continued.

For Sundry Alterations at the Middlesex Music Hall, Drury Lane, for Mr. J. L. Graydon. Mr. ALFRED WRIGHT, Architect, Belgrave House, 192A Brompton Road, S.W.	
Baggs . . . . .	£573 0 0
Beale . . . . .	547 0 0
Cook . . . . .	509 0 0
Johnson . . . . .	490 0 0

For Alterations, Additions, &c. to Nos 14 and 16 Clapham Road, for Mr. G. F. Cotton. Mr. J. W. STEVENS, Architect, No. 1 Dyer's Buildings, Holborn, E.C.	
Hatfield . . . . .	£279 0 0
White & Co. . . . .	217 0 0
Lavender & Son . . . . .	199 0 0
CREED (accepted) . . . . .	194 0 0

For London Almshouses, Brixton, for the Corporation of London. Messrs. DAVIS & EMANUEL, Architects, 2 Finsbury Circus, E.C. Quantities supplied by Mr. H. P. Foster, 5 John Street, Adelphi, W.C.	
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Colls & Sons . . . . .	£13,300 0 0
Mowlem & Co. . . . .	13,000 0 0
Harris & Wardrop . . . . .	12,274 0 0
Rider & Son . . . . .	12,248 0 0
Maxwell Bros. . . . .	12,058 0 0
Williams & Son . . . . .	11,970 0 0
Bangs & Co. . . . .	11,964 0 0
Grover . . . . .	11,962 0 0
Little . . . . .	11,896 0 0
Cunder . . . . .	11,619 0 0
Jerrard . . . . .	11,589 0 0
Onthwaite & Son . . . . .	11,510 0 0
Lawrance & Son . . . . .	11,256 0 0
Holliday & Greenwood . . . . .	11,151 0 0
Greenwood & Sons . . . . .	11,048 0 0
Gentry . . . . .	10,500 0 0

## LYDDINGTON.

For Erection of Farm Buildings, Parsonage Farm, Lyddington. Messrs. ARUNDELL & TARTER, Architects.	
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## Alternative.

	Estimate A.	Estimate B.
Phillips, Swindon . . . . .	£1,365 0 0	£1,225 10 0
Beaven, Bristol . . . . .	1,340 0 0	1,220 0 0
Williams, Swindon . . . . .	1,290 0 0	1,150 0 0
Wheeler, Wantage . . . . .	1,286 18 5	1,141 14 5
Barrett, Swindon . . . . .	1,240 3 6	1,111 4 11
Colborne, Stratton . . . . .	1,189 10 0	1,116 0 9
LOOKER, Stratton (accepted) . . . . .	1,165 10 0	1,037 15 0
* Informal.		† Late.

## NOTTINGHAM.

For Parochial Room for All Saints' Parish, Nottingham. Mr. FREDERICK JACKSON, Nottingham, Architect.	
Hind, Nottingham . . . . .	£997 0 0
Huskinson & Jefferys . . . . .	989 0 0
Lynam & Kidd . . . . .	807 15 0
Bell & Son . . . . .	765 0 0
Vickers . . . . .	718 19 0
Beck, Matlock Bridge . . . . .	698 0 0
S. & J. CARGILL, Nottingham (accepted) . . . . .	

## OXFORD.

For Detached Villa on the First Portion of the Oxted Stone Hall Estate, Oxted, Surrey. Mr. D. R. DALE, F.R.I.B.A., Architect.	
DALES, Thornton Heath (accepted) . . . . .	£2,200 0 0

## WAKEFIELD.

For Six Houses in Clayton and Carlton Streets, Westgate End, Wakefield, for the Wakefield Equitable Provident Land and Building Society. Mr. ABRAHAM HART, Architect, Thompson's Yard, Westgate, Wakefield. Quantities by the Architect.	
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## All Trades and Fittings.

Holmes Bros., Lake Lock, Stanley . . . . .	£899 0 0
J. & J. Mountain, Wakefield . . . . .	840 0 0
G. Mountain, Wakefield . . . . .	810 0 0
Richardson & Son, Newton . . . . .	790 0 0
Lockwood, Westgate . . . . .	785 0 0
Cawood, Westgate . . . . .	780 8 0
Tattersall, Wakefield . . . . .	772 18 0
W. Clark, Westgate . . . . .	758 0 0
O. Clark, Westgate . . . . .	730 9 0
WOULDS, Sandal (accepted) . . . . .	720 0 0

## Excavator, Bricklayer, and Mason.

Walker, Castleford . . . . .	500 0 0
Bagnall Bros., Wakefield . . . . .	416 10 0
Flower Bros., Wakefield . . . . .	413 11 0
Tattersall, Wakefield . . . . .	405 3 0
Storr, Wakefield . . . . .	410 0 0
G. Mountain, Wakefield . . . . .	395 0 0
Lockwood, Westgate . . . . .	375 0 0

## Slater.

Rycroft, Wakefield . . . . .	46 10 0
W. Clark, Westgate . . . . .	45 10 0
Pickles Bros., Leeds . . . . .	42 0 0

## Glaziers, Plumbers, and Smiths.

Kirk, Wakefield . . . . .	81 12 0
Flis, Wakefield . . . . .	81 0 0
Snowden, Ossett . . . . .	63 0 0

## Plasterers.

Friar, Wakefield . . . . .	55 0 0
Reynolds, Wakefield . . . . .	51 12 0
Platts, Wakefield . . . . .	47 10 0
Shaw, Wakefield . . . . .	45 0 0
Driver, Wakefield . . . . .	43 16 3

## Carpenters and Joiners.

Terry, Castleford . . . . .	245 18 2
J. & J. Mountain, Wakefield . . . . .	235 0 0
Cawood, Wakefield . . . . .	230 0 0
Holmes, Stanley . . . . .	225 0 0
Cressoy, Wakefield . . . . .	218 16 0
A. M. Craven, Wakefield . . . . .	210 0 0
Jowett, Thornes . . . . .	199 0 4
W. Clark, Westgate . . . . .	194 10 0
E. L. Craven, Wakefield . . . . .	198 9 6

## Painters.

Goodall & Goodall, Wakefield . . . . .	23 16 0
Holmes, Wakefield . . . . .	18 18 0
Snowden, Ossett . . . . .	16 0 0
Clark, Wakefield . . . . .	15 3 0
Stafford, Wakefield . . . . .	10 10 0



MITCHAM.

For Alterations and Additions to Butcher's Shop, Beddington Corner, Mitcham, for Mr. Vince, Mr. THOS. LOCKWOOD HEWARD, Architect, 7 John Street, Bedford Row, W.C.  
Aldous, Carshalton . . . . . £95 10 0  
HAZELL, Beddington (accepted) . . . . . 85 0 0

WOOLHAMPTON.

For Erection of First Portion of proposed New Buildings at St. Mary's College, Woolhampton, near Reading, Berks. Mr. F. A. WAITERS, A.R.I.B.A., Architect, 4 Great Queen Street, Westminster, S.W. Quantities supplied by Mr. W. H. Brayshaw.

Norris . . . . . £5,884 0 0  
Parmenter . . . . . 5,560 0 0  
Kemp . . . . . 5,399 0 0  
Kimberley . . . . . 5,110 0 0  
Claridge . . . . . 5,071 0 0  
BUCKLE & WHEELER (accepted) . . . . . 4,350 0 0

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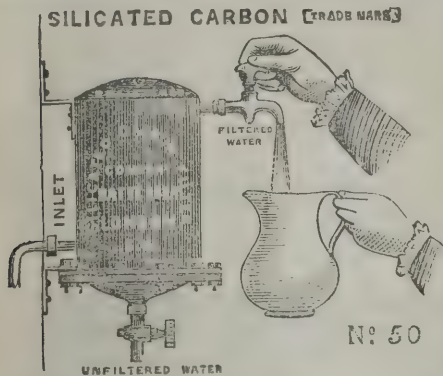
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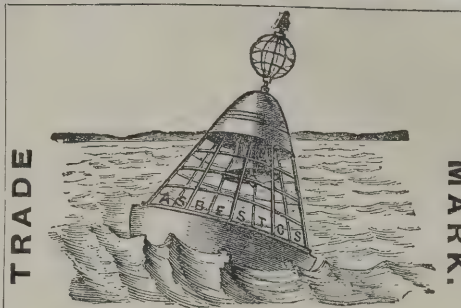
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## THE DEVELOPMENT OF DOMESTIC BUILDING.



AMONGST other things which the advance of scientific research in these days may suggest to the inquiring mind, is the principle of the organic development of domestic building. Speaking roundly, all things whatever are now pretty well understood to be necessarily subjects of development, under the strict reign of law; nothing comes by haphazard or caprice, adventure or misadventure; nothing exists except as an adequate effect of causes past, and no less an adequate cause of effects future; and

they who can read the language of building-construction and building-art cannot help seeing that in both these respects there is a definite course of progress to be traced, in all cases of sufficient importance, whereby the typical character of our dwellings has changed by steps as years have rolled on, and has so changed, as a general rule, always in very much the same direction. The architectural tourist who at this season is engaged in contemplating and sketching the remains of old times in many a quaint city and village abroad and at home, may find everywhere illustrations of this, and if he cares sometimes even to sketch a little less, perhaps, in order to think a little more, he may find a profit in it.

Not long ago, Mr. BERESFORD HOPE, in making some observations at the Health Exhibition on the interesting representation of a street of Old London, which amuses the visitors so pleasantly, pointed out with his customary force how the illusion might be made much more emphatic if, instead of the smooth, level boarding of the counterfeit thoroughfare, Mr. BIRCH could have introduced some piquant kind of pebble paving, neither smooth nor level, characteristically littered with a variety of scarcely savoury or salubrious refuse, and along the centre formed a running gutter almost less savoury and salubrious still. The speaker might have added that the demeanour of the citizens occupying the houses, and of those passing by, as well as their choice of language and their subjects of conversation, must none the less have been materially modified from the usages of the present day if the simulation were to be more complete, and that a great deal more besides in the way of dress and equipment, tone and temper, was very different indeed in the old days from what we see in the new. But even the most minute comparisons of this kind would not have accomplished an exposition of the scientific principle before us; for the architectural archæology of our day is still too much occupied with superficialities, and it is not always so easy to get below the surface as it ought to be. The story that is told by the houses of successive generations in an old town, if taken with strict reference to building characteristics alone, is an extremely curious story, and one that is in a certain way more curious even than the corresponding history of the people who built the houses and who lived in them. No doubt the character of those old folks and of their doings gave character in a general way to their buildings; but in a special way it is the builder rather than the dweller whose personality the building has always been governed by, just as in our own day it is the architect and not the mere owner or paymaster whose idiosyncrasy is manifested.

The anachronism of the imitation of antiquity which English architects so much indulge in becomes very apparent when we take up this line of thought. Not only does an English family of the eighteen hundred and eighties require to modify its arrangements considerably when settling down in a new house which has been built too successfully on the model of the fifteen or sixteen hundreds, but the whole spirit of both construction and design must be compromised in the imitation almost still more notably. Properly speaking, however, our building simulations of this kind, in spite of all the pains we take, are only superficial simulations after all, in which the outer skin is so far antique, but the inner organisation wholly modern; and were it not for this, indeed, even the most eccentric people could not possibly occupy them.

Perhaps it is in the article of plan that the progress of domestic architecture is most remarkable. We have only to look at any example, for instance, the Elizabethan, or even the Stuart period, which happens by accident to have been kept sufficiently unsophisticated, and the perfect impossibility of accommodating a family of the present day in such unorganised congeries of apartments is at once manifest. Compare it with a new house which has been what is called designed in the Elizabethan or Jacobean style, and, however carefully the designer may have imitated the ancient artistic character, the arrangement of the rooms is seen to be altogether different; or we ought rather to say the rooms themselves are altogether different rooms, and they are only dressed more or less in masquerade. Nor is it difficult to the initiated to trace step by step the course of progress from the one spirit to the other spirit, one generation improving the work of another upon a perfectly systematic principle. Domestic plan, in a word, has scientifically developed itself in the interval, so that the English house of the one date and the same English house (so to speak) of the other date are two houses as entirely unlike as the Greek temple and the Gothic church. And there are two points, as we think, not generally noted here; first, that this development of character, as matter of fact, includes with the article of plan the whole province of construction and artistic grace; and again, that the very operation of development is the act of a professional class, and not of what we nowadays call the public. Indeed, it is matter of wonder that even at present, when the amateur is rampant, the effect of general lay opinion, whether public opinion or private, should be in architecture so very insignificant as it is. There is an absurd formula of speech very much used by archæologists whereby the building of historical edifices is attributed to historical magnates, such as kings, bishops, and nobles, in such a very personal way that it would seem to be believed that the artistic and scientific direction of the workmen was actually conducted by those personages as it would be in our day by professional architects, just as if it were to be said that Queen VICTORIA built in her earlier days the Brompton Boilers, and at a later date the Albert Hall. It is notorious, however, that even such a one as an amateur of the moment who professes to his friends that he designed his own house is easily discovered by them on closer inspection to be a mere pretender; however bad the house may be, he has had the aid of somebody in making it no worse. Not only, therefore, ought critics of housebuilding to refuse *in limine* to believe in amateur influence, but they will find a much more wide and interesting field than they may expect in the study of the procession of professional intelligence by which, age after age, the improvement of domestic plan has been so signally accomplished. In all professions men run in packs; and it is a most remarkable instance of this that in each generation the whole building work of a locality is found to be so much alike in principle, no individuality, as a rule, clinging very much to the mode of the past, or forecasting otherwise than slightly that of the future.

The way in which a mere system of internal disposition carries with it its own peculiarities of structure and of artistic effect is a vital point in the true archæology of this question; and indeed this harmony of architectural style is a thing which in practice it is impossible to imitate fully. Houses of the present day which are designed in the style of Queen Anne even, when looked at in this light, are as gross shams as any, although the period imitated is one almost of yesterday. The admirers of this mode, if they would try the effect of an exact reproduction of a veritable example of the period, would soon find the true value of what they admire in the shape of an untenable property.

Designing a house in a bygone style, therefore, is in practice nothing more than dressing up a modern plan, modern construction, and modern notions of artistic effect, in a semblance of antique superficiality. The whole scheme of domestic building has developed itself up to the present moment in a certain inevitable course, and nothing can alter the facts of the condition thus arrived at, as the actual mode of the day. Whether it is advisable to imitate the antique at all in such circumstances is not the question we are considering, but the impossibility of carrying the imitation farther than a very thin skin is surely palpable. We may almost say it would require a whole company of artisans to arise from the grave to carry the effect into anything like authenticity.

At any rate, we may be allowed to doubt the expediency of tampering too much with the proper plan of our day in



endeavouring to please odd people by the introduction of fantastic features. Some otherwise good houses—and expensive houses—seem to be much too freely trifled with in this way. In another generation all the piquant tit-bits of plan and of design will have to be altered; and it may sometimes be fortunate if the alteration can be achieved without discredit to the memory of the playful architect.

### SUBJECTS FOR PICTORIAL DECORATION.

**I**N the present tendency towards a revival of the Renaissance style of architecture for large public buildings which admits, if it does not demand, pictorial decoration upon at least its interior walls, a few words may not be misplaced concerning the subjects adapted to such a purpose.

In spite of the artistic feeling now growing up amongst us, the better cultivation of which must henceforward form a component part of a liberal education, it must be confessed our surroundings are not of a character to favour their adoption in pictorial art of the heroic kind. In the first place, modern costume, even in the few cases where official vestments are retained, does not lend itself happily to pictorial treatment. Neither is it possible in this age of critical literalism—even to an insistence upon archæological exactitude in artistic representation—to adopt any other of a more suitable character. So that there are only open to us two alternatives: either to accept what we find, or altogether to abandon the real for an imaginary or more or less symbolical mode of treatment. Of course there are occasions when the former must be adopted or nothing at all. We can hardly imagine, for instance, a conclave of modern statesmen, say on the affairs in Egypt, arrayed in the sweeping folds and splendid personal adornments of the Middle Ages. Still, by keeping these two modes of treatment strictly separate, a judicious distribution perhaps need not jar on the artistic sense. Although such a course could not produce the unity and consistency of the finest periods of art in the past, it would be better to recognise it as a legitimately conditional one in a transitional period, as the present one with us must certainly be considered. We shall attempt to throw out suggestions from both points of view. But first of all it would be well to indicate the general qualities required for such decoration.

A subject adapted for pictorial decoration in a public building should have these characteristic qualifications. First, it should be weighty and important in itself, and admit of a corresponding largeness of artistic treatment; secondly, it should be general in its interest, and not aimed above the popular capacity of understanding.

The first range of subjects which strikes one is obviously the historic. Here, at least, is room for a vast selection of circumstances as well as costumes. Every shade of character may be given from the meanest to the highest; and even if the painter has to fix his models on known types, where they exist, yet he can put what expression into their faces he chooses. Even in this department he can play with his imagination almost as much as he wishes; as in the half mythical epochs of Arthurian legend and druidical ceremonial when an unformed society was making its struggles towards a more developed organisation. Or he can make selection of later periods of gorgeous pageant and high festival, with all the appointments of regal magnificence and splendour. Quieter episodes will meet him in monastery and convent and the tranquil pursuits of peaceful and learned men. In libraries and the abodes of learning it would be good to remind us of CHAUCER and his genial humanity, of SPENSER and the refinements of poetry, of SHAKESPEARE in his wide command of every human emotion and sentiment, of MILTON with his lofty eye fixed upon that liberty of thought and expression to which modern society owes so much. Other suitable subjects might be found in events or passages in the lives of those scholarlike men who have won for themselves a place in the temple of fame, whose voices are still heard, and who are still beloved by all thoughtful persons: the “judicious HOOKER,” with his modest mien and reflective bearing; good GEORGE HERBERT, the quaint singer of the heart’s best emotions; JEREMY TAYLOR, whose noble prose is too much forgotten in a busy generation—all these and many more in their lives, habits, and circumstances offer abundant material for every kind of illustration, and would form a wholesome stimulus to thought and reflection. It is true that historical representation

on a large scale and in its most stirring situations seems in a great measure out of date, but this, assuredly, is only because there has been little demand for it in the close domestic life of English homes, and the indifference with which large public works have been recently regarded.

Next to the historic may be mentioned the allegoric as another field suitable for pictorial decoration. In this department we should take the symbolic and personified representations of Trade, Commerce, War, Peace, Progress—the modern appliances for the transmission of thought, the forces of steam and electricity as applied to material uses, and so on. In the hands of a RUBENS these would certainly all have been capable of receiving a pictorial form without a loss of dignity or any descent into vulgarity, as is, indeed, exemplified in some of his works; and although many of these subjects have been treated over and over again, yet they would always take a new impress from a distinctively individual mind. At least, they would have the advantage of affording room for the display of drawing and colour, which, however misplaced in smaller work, making a more personal appeal, would be consistent and suitable enough in decoration.

From the allegoric we may naturally pass to the consideration of what is called the “Classic” order of subjects for decoration: that is, what relates to the State, history, and religious creeds of ancient Greece and Rome, which still retain a powerful significance for modern society. Of the fables of the ancient world which maintain the strongest hold upon the human mind, those of the gods and goddesses, in their origin, nature, adventures, and doings, their profound significance, and of the truth and beauty which they embody, it is not necessary here to speak at large. The emergence of VENUS from the sea-foam will always be to us a symbol of the purity and freshness from which true beauty must be born. HERCULES will stand to us a memento of the fight to be maintained against what is bad, low, and degrading. MINERVA will remain to us a monument of intelligence and intellectual power. The mingled forms of satyr, faun, and nymph will always speak to us as expressions of sentiment or emotion. We shall here find conceptions ready to hand of the highest types of the human form as the natural expression of the highest mental qualifications, as also the contrary. The religious and festival processions furnish us with material for the display of a hilarious abandonment to joy not possible to any occasion of our more subdued modern life; its adaptability to the frieze form rendering it still more valuable. Then, again, we have the wide field of ancient literature: the epic of heroes and heroic deeds sung by HOMER, the large tragedies of ÆSCHYLUS, SOPHOCLES, and EURIPIDES, with the monumental fables—if they may be called fables which contain so much essential truth—of PROMETHEUS, ŒDIPUS, and HERCULES. To these may be added the historical circumstances of two nations, many of them beacons for human government and action which cannot be forgotten whilst the race continues to exist.

Another department of our subject may be designated the literary. This would include the illustration of those large and important literary works which are familiar to all intelligent persons, which have indeed formed a part of universal education. Amongst these the dramatic scenes of SHAKESPEARE would first suggest themselves as offering typical subjects for the artist’s pencil. SPENSER would furnish us with episodes no less pictorial. Perhaps scenes from MILTON and DANTE would be generally too serious for ordinary decoration, but there would be places where these too might find a fitting position. Occasionally even less important works might be chosen for illustration, but, as a rule, it would be desirable to confine such works to the highest and best forms of literature.

After these there still remains to us the field of religion—a very wide one, both directly and indirectly. Though ecclesiasticism, at least in its pictorial display, must be considered to be losing its hold on the popular mind, that of religion must always maintain its ground. The varied scenes and incidents of the New Testament will never grow old or stale, however often treated, for their representation will always take the impress of the mind which strives to reproduce them, and will appear continually on new grounds of appeal. The parables of CHRIST, from their pictorial character, wide application, and their capacity of being universally understood, are very suitable for illustration. Without falling into conventional formalism—for this field has been widely worked in former days—much might be done, from a modern point of view, in bodying forth noble incidents in the lives of heroic and saintly persons, to



whom life was less dear than truth and loyalty to their principles, and which might be made fresh and interesting. Even the imaginative powers might fitly be called into play for the pictorial realisation of the ideal life which has been so touchingly and sweetly dwelt upon by some of the early Italian masters.

Passing from these, a number of miscellaneous subjects present themselves, as single figures of notable persons, others representing the practice of the useful arts, or symbolising the abstract professions, so many noble examples of which have survived from the Middle Ages. Musical and ceremonial processions of a semi-imaginative order may be mentioned; always remembering not to mix incongruous periods of time and inharmonious circumstances and events in the same apartment. The operations of agricultural and rustic pursuits always exercise a fascinating influence over the mind.

As regards the practicability of decoration on a large scale, a few words may be said. Although these decorations have been spoken of as painting, it is by no means necessary or desirable to limit them to that material. Some time ago an examination of the various methods available for artistic decoration was made in this journal.\* Other sound processes have since then been discovered or published, as that of A. KEIM in Germany.† Upon certain conditions of this decoration it is necessary to dwell very definitely; that whether the material selected be pigment, mosaic, sgraffito, inlay, or of any other kind, it must be broad and simple in design, as well as in workmanship. It may also be added that if colour is adopted, it should be used, generally speaking, rather in tints than in full-blown hues, and with a flat rather than a round treatment. For these conditions there are two reasons—one, that a pictorial mode of treatment, as distinguished from a decorative one, would be sure to injure and not to assist the architectural character and structural harmony of the building by a too particular and forcible appeal to the observation; and the other is, that extreme elaboration of treatment from a manipulative point of view would be prohibitive both as regards expense and the time required to complete the work. The designs should, therefore, be made in such a manner that they could be carried out by intelligent workmen under artistic supervision. Under no other circumstances will it ever be possible for us to form a school of decoration worthy of the name, or to have it executed on a large scale. The artist and the architect must work together, or at least not go counter to each other. The decoration must be a part of the building, and the building serve as a field and frame for the decoration. In this there is nothing extravagant or impracticable. By such a judicious system and distribution of work we may yet redeem the poverty-struck appearance of our walls, both internal and external, and leave something to future generations worthy of our own. But by no other means can this be accomplished. If artists are called upon completely to carry out their own designs, they must be limited, expensive, and long in growth. Executive skill, educated to narrower fields of manipulation, can only be wasted at a great disadvantage and its power lost.

There is no longer the excuse for the present apathy in regard to the pictorial decoration of architecture to say that permanent modes of painting even are not available. Recent inquiries and experiments may be said to have settled that question. And even if the work of the brush could not be left in its virgin condition, there are plenty of other methods and materials which are unimpeachable. So many experiments have been made—in the Westminster Palace, for example—which have not been satisfactory, that it would be a pity to let the matter drop, throwing away so much valuable experience. Let us strenuously recommend the agitation of the subject to those whom it may more nearly concern, and hope that in this respect England, which is doing so much for the fine arts in various directions, may establish a school of artistic workmanship purely its own, and one which may act as an incentive and beacon light to every other nation. The encouragement of such a state of things would certainly be a more worthy expenditure, both of taste and means, than the bestowal of fabulous sums for dubious articles of *virtu* which have perhaps nothing but their rarity—a circumstance upon which the world of art may sometimes be heartily congratulated—to recommend them.

## THE STATE AND ART.\*

THERE was an old Greek dance in which a torch was passed from hand to hand, and the action has been accepted as a type of the duty that lies on men to transmit the light of knowledge from one generation to another. "Every man," as HAMLET says, "has his own business and desire," but in addition to what he owes to himself as an individual, there are the obligations which arise in his relation as an unit in a great society, of which the duration is not to be measured by the brief term of a man's life. It was with a thought to the future that colleges and universities were founded, and the old trade guilds made it clear that even the humblest workers could almost instinctively rise above selfish interests. In England the universities cannot help diffusing the knowledge which is based on the scholastic "Arts," but it is otherwise in respect to the knowledge which is connected with what are called the fine arts. Elementary teaching is to be had in Government art schools, schools of music, and the like. But in all the higher branches of the arts the State does not provide teachers, and the artists decline to recognise any obligation to impart their knowledge. Having attained their skill with difficulty, they see no reason why they should make a more smooth way for their successors—it may not be plain to them why they should have successors. Hence we find a great artist like TURNER keeping his house fortified against the entrance of his brother painters, and a great actor like EDMUND KEAN swearing that he would sooner murder his son than teach him. REYNOLDS was eloquent in discoursing on everything but his own practice and experiments. If he wished to turn students away from portrait-painting, he could not adopt better tactics than the delivery of his annual addresses, in which the works held up for imitation are figure pieces, landscapes, and sculpture. Of late years there is a clearer recognition of social duties, one of the principal being the duty of teaching. But very few English painters have pupils, or are willing to speak of the methods they employ. Foreign artists visiting an English studio are often surprised at the habit of suspending work while they are present. Among architects pupilage is an institution, but it does not follow that it means a master's teaching. The law in the fine arts, according to English notions, seems to be every one for himself.

Much is to be said for and against the English practice. It fosters individuality, and its admirers can point to remarkable results. In every international exhibition the English paintings hold their own, yet the English school is little more than a century old, while some will say that it does not even exist. French critics are so deeply impressed by the sight that they are forced to prophecy a great future for English art. But the principle of "every man his own master" is not always an unmixed gain. "To be self-taught," says the greatest of living writers, "is a misfortune, except in the case of those extraordinary minds to whom the title of genius justly belongs; for in most cases to be self-taught is to be badly grounded, to be slovenly finished, and to be preposterously conceited." These words are perhaps more applicable to what is seen in an English art exhibition than to what is to be seen in English literature, for in the former there is a greater independence of that form of law which is known under the name of style.

Is it wise that the perpetuation of art should be left to individual efforts, or, in other words, to chance? The French do not think so. During two centuries, at least, and under very great varieties of governments, they have preserved a national art school, and while so many institutions have been overthrown, it has continued to flourish. The purpose of the pamphlet by Mr. W. H. WHITE is to describe how the French school was founded, how it is regulated, and what it has done. Mr. WHITE is nothing if not official, and it is natural that he should ascribe the foundation of the school to COLBERT, and assign him a position corresponding with that which so many people are agreed to give to the late PRINCE CONSORT in relation to the art of this country. We have not taken his view of the history of French art, and prefer to tell the history of the Academy in our own way.

We lately described the constitution of some of the guilds which existed in Rouen. One was formed of painters and sculptors, with St. LUKE for a patron saint. A similar guild

\* Vide Vol. xx., No. 517, November 23, 1878.

† For a particular description of this process, see *Journal of the Society of Arts*, No. 1630, February 15, 1884.

\* "Architecture and Public Buildings: their Relation to School, Academy, and State in Paris and London." By William H. White, Architect. P. S. King & Son.



existed in Paris, and was known as the Communauté de Saint-Luc. The members were known originally as *imagiers* or *imaginiers*, or, in other words, they considered their highest duty to be the making of images for churches. The trade rules corresponded with those in other guilds. It was necessary to serve an apprenticeship of five years and a companionship of four years before a man was eligible for election. There was a master with despotic powers over all the works of painters and sculptors. This arose from the connection of the guild with ecclesiasticism, and was of use in securing that pictures and images should be of an orthodox character. Nude figures were prohibited in churches, and by the rules of the guild it was penal for an artist to employ a model. It seems incredible, but art in France had to subsist amidst absurd regulations of that kind until the middle of the seventeenth century. In holes and corners, drunken shoemakers, and other needy folks who had scores at wineshops, were, however, induced to pose for the benefit of LE SUEUR, SEBASTIAN BOURDON, CHARLES LEBRUN, and others. If an artist were able to become one of the king's painters (and the number was probably not determined in order to give some freedom to art), he was supposed to be beyond the control of the guild. But in 1646 the works of two of the king's painters were confiscated by the master; and, what is no less remarkable, the court of the Châtelet (or city court) upheld the act, on the ground that the privilege was valid only when painters were at work on pictures or statues for the king. In consequence of the decision, many works were seized. One exception was made—namely, CHARLES LEBRUN; but he was too honourable to stand apart from the sufferers, and to his clear head, determination, and diplomatic skill the Academy owes its existence. The tyranny of the guild was felt by patrons as well as artists, and LEBRUN was able to prevail on M. DE CHARMOYS, who was a friend of old NICHOLAS POUSSIN, to lay the artists' case before ANNE OF AUSTRIA, the queen mother. Through her influence an order was made by the Council of State on January 20, 1648, by which the infant academy was recognised, and the members of the rival society were forbidden to interfere with it. But the recognition was not accompanied by any gift for the support of the new school, while, on the other hand, St. Luke was wealthy, and could give excellent suppers. The venerable SIMON VOUET was elected master of the guildsmen, and he conceded the liberty to employ a model. His name was a tower of strength, for the principal painters of the century had worked in his *atelier*. MIGNARD afterwards became head of the old society, and as there was little to be gained by adherence to the cause of reform, he was able to attract LEBRUN's friends. An amalgamation was projected, and it seemed quite possible for the latter to be left alone. LEBRUN was not without resources. In 1654 he placed his academy under MAZARIN's protection, but not a florin came from the treasury. On the cardinal's death LEBRUN invoked the aid of COLBERT, who was more liberal, and, in 1663, the academy was included among the institutions which were recipients of the king's bounty. Thus, after seventeen years of struggle, LEBRUN was successful.

It is recorded that the first duty of the academy was to introduce the living model and afterwards to form classes for anatomy, geometry, and perspective. Accommodation was found for meetings and exhibitions in the Palais Brion, Hôtel de Richelieu, and finally in the new Louvre. But the 2,000 livres allowed by the State were insufficient to meet the expenses, and in consequence it was sometimes found to be impossible to hold exhibitions. Poverty, however, did not teach toleration. The academy would allow the model to be posed in no *ateliers* but its own, and used force to attain that end. The Society of St. Luke was attacked with bitterness for many years, and when at length it succumbed, the Academy commemorated the event by having a medal struck, with the absurd inscription "*Libertas artibus restituta*." There is consequently a resemblance in the circumstances through which the Royal Academies in England and France originated. In both there was an artists' squabble, and the Incorporated Society in St. Martin's Lane corresponded with the Communauté de St.-Luc. Both claimed to be endowed by royal munificence. In England the grant was only 5,000*l.* from the privy purse; in France it was an annual sum of 2,000 livres. The French Academicians felt themselves bound to open the exhibitions to the public gratuitously. The English Academicians acknowledged a similar obligation, but said they were compelled to charge a fee at their first exhibition, in order

"to prevent the room from being filled with improper persons." The subterfuge may still be used. It has enabled the Academicians to secure an independence which would be impossible in France.

If the French Academicians formed a less wealthy corporation, they contrived to do more for art education than was attempted in England. Every member had to pose the model daily for a month at a time; he was bound to paint or model in the presence of the students, to discuss subjects with them, and answer their criticism on his own work; he had to take his turn in directing the schools; and, in addition, to subscribe towards the expenses to the best of his ability. There was plenty of despotism in the treatment of rivals; but at the Revolution, when inquisition was made into abuses, the Academy was spared. MIRABEAU defended it, and perhaps with more willingness through admiration of that same despotism.

A school of the Paris Academy was not so well furnished with models as an art school in a modern English town, and it is recorded that when a cast of an antique torso was broken in one of the numerous removals its loss was bewailed as if it were a treasure of great price. There was only one prize that was of importance, the famous Prix de Rome. How it originated is not clear. About 1624 CHARLES ERRARD, then a youth of eighteen, arrived in Rome for the study of ornament, or rather for the accumulation of patterns. He was not so much an artist as an organiser. In course of time he obtained several contracts in Paris, and among others the decoration of a house belonging to COLBERT's father-in-law. We can imagine that ERRARD explained to the minister the advantages of a residence in Rome for an artist, and that, in consequence, LOUIS XIV. resolved to support twelve artists, each for five years, in that city. ERRARD was appointed to make the arrangements, and on the 7th of March, 1666, he set out from Paris with the first batch of students. While he remained in Rome he sent to Paris casts from Trajan's Column and other works, which are still in the Ecole des Beaux-Arts. Nor was he neglectful of his own interests. It was in the school in the Palais Capronica that he had plans prepared for the Church of the Assumption in the Rue St.-Honoré—a domed building which is no longer used as a church. Although ERRARD was as ready to undertake architecture as any other kind of work (it deserves to be mentioned that he translated the four books of PALLADIO), he does not appear to have had among his subjects a student who was recognised as an architect. The record of the architects who won the Prix begins in 1720, and, unless we are mistaken, architects were not associated with the Academy until about that time. There was an architectural society which in one sense was an academy; but, as it did not obtain a charter until 1717, the members do not appear to have had any of the privileges belonging to LEBRUN's Academy.

When a studentship in Rome was founded there is nothing to show that more was intended than the establishment of an advanced school, for which Rome was supposed to be a more suitable position than Paris. But as the rewards in the Academy schools were insignificant the studentship was recognised as the one prize, and just as all roads are said to lead to Rome so the whole system of teaching is, and has been for many a year, arranged with a view to the attainment of the Prix de Rome. In many cases the victory has denoted genius as well as a peculiar mode of training, but in other cases it has been held to be evidence of no more than the training. From the Abbé DU BOS, in 1719, to VIOLETTÉ LE DUC, in 1864, there has been unceasing grumbling at the defects of the academic system. The alterations which have been made are evidence that it was not perfect. On another occasion we shall attempt to point out the shortcomings of the French school, which in this country is admired for merits it does not possess.

(To be continued.)

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**Brighton.**—The large stone church in Queen's Square, Brighton, is, under the superintendence of and upon the plans and specifications prepared by Mr. Arthur Loader, architect, of Brighton, being carefully restored and recased with "Corsham Down" stone picked, supplied from Pictor & Co., Bath. Improved means of ventilation by "Boyle's" large up-suction ventilators, and additional air inlets have been adopted, the sanitary arrangements being also much improved. Mr. John T. Chappell, of 149 Lupus Street, London, is the contractor under a schedule.



## STUDIES OF LONDON CHURCHES.

[BY A CORRESPONDENT.]

(Continued from page 166.)

THE site of *St. Anthony*, Globe Road, Bethnal Green, is very like that of a church before commented on, Holy Trinity, Dalston Junction, and is designed by the same architect. It lies with its axis north and south, with streets at each end running transversely to it, so that scarcely any portion of the sides can be seen. As at Holy Trinity, there are no windows to the aisles. The walls internally are plastered, and the nave arcade is of stone. No tower exists, but there is a *flèche* over the division between nave and chancel. The latter is formed of two trusses about a foot apart, carrying the *flèche*. The nave roof is an open one, with substantial timbers. The chancel has a cradle wood ceiling neither stained, coloured, nor varnished, but with rather large circular medallions representing the emblems of the Twelve Apostles. Some of these emblems are not very pretty, especially when represented on a large scale, and their introduction at the present day is not to be recommended unless done very artistically. To have represented the Apostles bearing their characteristic emblems would have been more costly, but the writer cannot but think that anything short of this is undesirable. In like manner the emblems of the Crucifixion represented in a matter-of-fact way are no particular adornment to a church. How different is the effect when they are treated by the pencil of a true artist!

The interior of the famous church of *St. Mary-le-Bow*, Cheapside, was improved by Mr. Blomfield not long since without any destruction of the integral parts of Wren's building. It has been gilded and decorated in colour in a quiet subdued style with good effect. The pavements are laid with white, black, and grey unglazed tiles, only 3 inches square, colours which are in thorough keeping with the surroundings. Perhaps it may be hypercritical (and certainly Mediæval, and even earlier precedent, may be found), but do the three Greek crosses introduced in the pavement just to the west of the altar, only to be trodden upon, seem in the proper place? The ceiling or walls are surely better suited for such very sacred symbols of our faith. The vein marble step to the chancel arrangement harmonises well with the sober neutral shade of the paving. The choir seats are very happily designed, and quite in keeping with the style of the church. They are also without any admixture of Gothic feeling, an error that has been committed in several of the other City churches, when architects, whose practice has principally been in that style, have been allowed too much of their own way. The nave benches are of pitch pine, stained so as to harmonise with the dark old oak panelling. Though it is to be regretted that they were not of oak, the effect is good. The iron gaseliers, designed by the architect, are about the best in character which the writer knows. They are free from that too frequent firework-like and gimcrack ornamentation which is the delight of some metal-workers, especially Mediæval metal-workers, who "pile it on" exuberantly. The ornament in this case consists principally of honest twists and scrolls; the colouring is a kind of blue-black, sparingly gilded, without any other tints.

The church of *St. Paul's*, Knightsbridge, has not long since had a beautiful and effective decorative addition made to it. The blank, dreary surfaces under the galleries have been brightened up by glazed encaustic tile frames, flush with the surface of the wall, inserted under each window, with which they correspond in width. Each has a different subject representing some incident in the life of our Lord; and under each is an inscription stating to whom it is dedicated as an affectionate memorial. This is a good idea for the designers of new churches, who may arrange to leave blank recesses treated in some simple, effective way. The appearance would then be good, even if they are never filled up with subjects. The invention—or perhaps it may be better said the outcome of the invention—of hand-painted tiles seems likely to create almost a revolution in mural decoration. It has obvious advantages over mosaic, fresco, or tempera, though inferior, artistically speaking. But it would take too long and lead into too much discursiveness to enter into the respective merits of these different modes of decoration, while, moreover, the subject has been often ably treated of before by several writers. Let us pause for an instant, however, before losing sight of this tile decoration. In the present example the colours employed are neutral, and the treatment, as it ought to be, quite flat. Each panel has the same kind of architectural conventional canopy work, so that instead of being disconnected and an accidental appendage to the wall, such as could be taken off and hung up again, it has every appearance of forming an integral feature.

We witness at the church of *St. Luke's*, Kensal New Town, a vigorous attempt to grapple with the difficulties of a building for a congregation where every member of it can see the preacher and hear the sermon well, or to put it in another way, where every worshipper can witness the great sacrifice at the altar. For curiously enough, a church, the ground-plan of which is conven-

ently arranged for an Evangelical service (provided it has a fairly developed chancel), will often be equally suitable for a very High Church ritual. Whereas a church designed for a flock of "moderate" views does not please the "extreme ritualist," or the ardent Evangelical. The architect of *St. Luke's Church* (Mr. J. T. Lee), was a pupil of Mr. Blomfield, and the influence of the school of that master is evident. Economy has been a great object, and too much in fact, in the writer's humble opinion, has been sacrificed for it, the result being that the exterior even of the west front, which ought to be one of the most impressive parts, save the east end, lacks the dignity that a town church should have; a small parish church in a retired part of the country requires little stateliness. When the writer saw this church some time since, its east end faced open fields, but the enormous increase of building in the western suburbs of London has probably obliterated them. The north and south sides are little seen, there being no roads adjoining them; while at the west end the houses in the street come up close to the church. Considering the manner in which the architect was evidently tied down by the small funds at his disposal, it must be said that he has accomplished his task with much ingenuity and fertility of resource, even though one of the elements of effective architecture—*i.e.*, height—is wanting. If one wished to be hypercritical, it might be said that on strict Gothic principles Mr. Lee has transgressed in the west façade, cleverly as he has designed it. Feeling that if he exhibited the whole width of the nave and aisles (the former is some 35 feet in span) the building would look low and squat in its proportions, he has cut a square piece out of the south-west and north-west angles and carried the wall over by arches. This gives space for a little west window in this portion of wall, and internally has a very picturesque effect. The nave and aisle roofs are continuous, so that there are no ashlar-pieces to the former. This is a disadvantage not always to be avoided. The aisles are very narrow, without any seats, just sufficiently wide to serve as passages. Some may remark that it would be better to have a very wide aisle-less nave, and thus save the nave arcade and wall over it. But this would have reduced the apparent height of the building internally, have necessitated heavier timbers and construction to the roof, and have conducted to echoes, it being a well-known fact that churches with aisles and broken surfaces of wall are better, acoustically, than the parallelogram plan. Even as it is, the want of height previously alluded to has hampered the architect in the aisles, where, in order to get sufficient light, he has been obliged to make the windows too wide for good effect and the quarry glazing too large in scale. For the absence of a clerestory necessitates fuller admission of light through the outer walls. In order to economise, nearly all the edges of the brick angles are square and unchamfered, the material used being the ordinary grey stock, with a few bands of red brick. Following out the same object, the spire is of brick, banded with stone, and set on a tower of insufficient height. Instead of being terminated by a finial, weathercock, or cross, it has only a mere ball at the summit, which makes rather a poor finish. There are no tie-beams or tie-rods to the nave roof, but hammer-beams, supported on stone corbel-shafts, square in plan, which in turn rest on oversailing courses of brick. This square plan of shafts also appears in the arch opening out into the eastern apse, for there is no regular chancel arch. The face of the common rafters to the nave roof is boarded, and only the purlines are visible. There are tie-rods to the roof of the aisles, which must certainly stiffen and strengthen the construction, where the weight and thrust come. Turning to the nave benches, it will be observed that in the panelling of the backs the boards are fixed horizontally instead of vertically. This doubtless saves labour in cutting and fitting, but variety in the grain is lost. To conclude with the notice of this church, it is a good specimen of earnest striving in ecclesiastical architecture towards something characteristic of this century, something that may be worthy of the ritual of the Anglican Church. By a series of such efforts men may hope in time to arrive at the ideal now only dimly shadowed forth in their minds. The writer has, unprompted, endeavoured to picture the difficulties which pursue an architect with little money delivered to his trust, and may add that he has had but too frequent experience of such in his own practice.

*St. Jude*, Gray's Inn Road, has a good interior, with a well-proportioned clerestory, an open-timbered roof to the nave, and lean-to aisles. The east end of the chancel has a large rose window filled with painted glass, with a triplet window under. As respects artificial lighting, this is well managed by two rows of pendant lights instead of one central line of coronas, a mistake too frequently made. The west window is of unusual design, as its side lights are occupied by quatrefoils, continued round the tracery head. It is believed there is Mediæval precedent for such a treatment. But the idea is rather suggestive of the window having been found too small, and widened afterwards. In this case it was not so, as the window has not been altered since the church was built. In another case, however, at *St. Matthias*, Earl's Court, the chancel, owing to want of funds, was built of insufficient dimensions. When further means were in after years obtained and the chancel enlarged, this border system of tracery was adopted as a mode of still utilising the old east window. The



corbels at St. Jude's carrying the chancel arch have on the north side a carved mitred bishop's head, and on the south side our Saviour crowned with thorns.

Coming up High Street, Shadwell, which winds slightly, you will at one point see the great mass of *St. George's-in-the-East* looming in the distance with fine effect, enhanced the more by the poor insignificant houses around. You must, however, take care not to keep your glance too high in the air, as mundane matters have to be attended to. To speak plainly, you will meet many a seaman of every nationality as you traverse these eastern streets of London (how unlike the West End! one might really be hundreds of miles away from Regent Street), and an accidental collision with one of these worthies of the more fiery nations might possibly induce the use of the too ready knife! The tower of *St. George's* is square at the base, with an octagon at the upper stage, the angles of the latter being well buttressed. It is much of the same type as *St. Anne's*, Limehouse, with a flag-staff planted at the top. The latter is well seen from the river, and serves as a landmark to mariners. At each of the four angles of the church a cupola rises. Though not so striking in its outline as *St. Anne's*, the tower of *St. George's-in-the-East* has certainly a picturesque aspect. Till within the last few years modern architects have been too much wedded to the ideas of towers and spires, forgetting that there is a very beautiful and extensive borderland of design between them. Witness such examples in Mediæval architecture as at Boston (Lincolnshire), Sutton (Cambridgeshire), Lowick (Northamptonshire).

The church of *St. Mary*, Abchurch Lane, City, was not long since altered internally under the direction of Mr. E. B. P'Anson. Comparatively low open benches have been placed in the greater part of the body of the church. The old dark oak pews to the south of the nave on a raised platform still remain, and in these the school boys sit. There is a new chancel-seat arrangement for the surpliced choir of men and boys. The west gallery remains untouched. All the passages have been paved with mosaicically-arranged tiles, and there is a new altar-rail of oak, not quite in the style of Wren. In order to have something in harmony with the surroundings, a marble and stone pavement in squares, or a Roman mosaic pavement would have been more suitable. However, doubtless, as in many other cases, the extra cost would have been deterrent. Again, the backs of the new seats slope to such an extent that there is a risk of a dull sermon exercising its not unusual effect. Barring this and their light hue, the style of these modern seats seems quite in keeping with the rest of the building. To have slightly "sized" the oak would have darkened it a little, and made a less violent contrast with the old oak. The grand old reredos had not been touched when the writer saw it. No gilding or colouring in blue had been applied, as in the neighbouring church of *St. Clement's*, Eastcheap. As respects gilding, one may feel sure that Sir Christopher Wren would not have objected to its being added to his reredoses or other oak fittings, for it well suits the material and removes any appearance of heaviness and sombreness in large masses of unrelieved oak. The plan of a square, domed over, with the angles chamfered off under the cornice, is an effective treatment in a town church. From another standpoint it seems well adapted congregationally for a small church, enabling everyone to see and hear, but involves greater expense in the roofing than the more ordinary plan. For a good roof or ceiling, truth to tell, is difficult to design inexpensively. Why should not some of our rising Gothic architects (for Gothic architecture will be true to its history, and stand many a greater blow, as it has before stood, than evanescent whims of fashion) strike out a new line for themselves and adopt such a plan? There is many a lesson to be derived from these quiet old City churches, and the lessons must, alas! be taken soon, before these sacred structures reared by our pious forefathers are swept away by the modern Vandals.

*St. Augustine's*, Stepney, consecrated a few years since, is a parallelogram of considerable width; in plan consisting of nave, chancel, and aisles, the walls and roof running straight through without break from east to west. The notion of the architect has evidently been to adapt the basilican plan to the requirements of the Church of England, substituting, however, a square east end for an apse. Whatever advantages this form of plan may have, it certainly, in a church of no great length, like *St. Augustine's*, gives the impression of its being unfinished and wanting a chancel. To tell the truth, at the first blush this was the writer's own impression when entering the building, though there are three bays to the nave and one to the chancel. The shafts carrying the principals of the ceiling at the commencement of the chancel, instead of being corbelled out from the walls like the rest, are carried straight down to the floor. This, therefore, follows out the basilican idea, and a chancel arch is dispensed with. One of the disadvantages of this type of structure is that one sees it all at once, and misses that which is often so great a feature in a church—the chancel arch. The basilican plan seems more suitable for a very large church, and not for one of average dimensions. After

thus generalising, the design of *St. Augustine's* must be commented on. The west front is markedly plain, with a very small bell-turret. It has evidently been the intention to bestow little ornamentation externally, as scarcely any part of the building is visible from the surrounding streets, except the upper portion of the roof, which towers above the houses of the adjoining Commercial Road. The clerestory windows are, accordingly, perfectly plain, and with square-edged jambs, &c., in one order. The east gable terminates in a chimney instead of a cross. The latter can scarcely be seen except from the backs of the houses. Turning to the interior, the ceiling of the nave is of that trefoil form found in North Italy, there being a collar to the principal rafters where the two curves unite; the clerestory windows, cut up through the lower foil, thus giving somewhat the appearance of groining. This is pretty and effective, and out of the common, but at the same time a rather expensive treatment. Moreover, a building must be of good height for the roof cornice to be thus brought down so. The nave ceiling is coloured, that to the chancel being treated in a more ornamental manner, as is also the clerestory. The aisles are ceiled in the same manner, and have no windows. The clerestory windows are, as regards the interior arrangement, in couplets. Externally, they appear as separate windows with piers, not mullions, between them. Over each couplet is a circular moulded panel, filled in with marble in geometric forms. The chancel aisle arches on the north and south side are of stone, the nave arcade of brick. It should be added that the building is of bricks pointed internally above the nave arches, and plastered to the aisles. The early Christian plan of "ambones" is here faintly shadowed forth, the north "ambo" being higher than the south. The former has a plain canopy, a necessity in such a building when one considers the curved form of the ceiling and the absence of chancel arch, or anything to break the echo. The southern ambo is used instead of the ordinary lectern. The former is approached from the chancel level, raised two or three steps above it, and placed about west of the boys' seats and book-boards, rather concealing them, but at the same time standing out well from the nave arcade walls. To sum up the merits of this building, the interior is undoubtedly striking, and, as has been shown, possesses several original features.

The interior of *St. Jude's Church*, South Kensington, cannot help impressing the spectator on first entering it, owing to its look of length and general spaciousness. At the extreme east end one beholds a large six-light tracery window filled with good richly-toned painted glass. This gives much warmth of effect in a position where it is much needed. The writer remembers examining the church shortly after it was consecrated (in December 1870), before the glass was inserted, and has been struck by the subsequent improvement—the softer and more pleasing light. But it is much to be regretted that the windows in the quasi-transepts are not in character with the above. For some of those under the south gallery are of the Munich school, picture transparencies, ill according with the others. When will the responsible custodians of a church learn to be more firm in this most important matter of artistic consistency, and insist on all the windows, if not designed by one firm, being at any rate in harmony, and subject to a complete well-digested scheme? Then, when all have been happily finished, there will be a history in glass on the walls that can be read, instead of a series of subjects, which, however admirable in themselves, are disconnected. In the large circle in the tracery head of the east window of the chancel is a representation of our Saviour standing, implying His coming to judgment, instead of the more usual one of His sitting in majesty. The plan of the church is rather peculiar, as there are double quasi-transepts, for the nave arcade (carried on iron columns) continues unbroken from east to west instead of the more ordinary transept arrangement being adopted. No clerestory exists. There are aisles to the nave and galleries to the "transepts," the latter kept back so as to be within the line of the aisle walls. There is a plain brick arch at the entrance to the chancel, and another at the entrance to the sanctuary. The latter is somewhat narrower than the chancel. The writer is not aware of any Mediæval precedent for this treatment, nor does he perceive any meaning in throwing an arch in this position and emphasising the sanctuary in this manner. Possibly, however, this may be another way of arriving at what is seen in some old churches and in many modern ones, *i.e.* the roof or ceiling of the sanctuary more richly ornamented than the rest of the chancel ceiling. Some beautiful coloured decoration was effected to the chancel not long since. Over the key-board of the organ, and on the wall opposite it, are represented two angels with harps, turning towards each other, bearing the inscription, "Te Deum Laudamus." Panels containing various emblematic flowers, such as the lily, passion flower, &c., occupy the remainder of the side walls of the chancel. There is an elegant painted reredos, but owing to the sill of the east window being rather near the floor, it has been necessary to place the figure-subjects rather too low to be thoroughly effective. Over the altar is the *Agnus Dei*, enclosed in a circular panel with the Evangelistic emblems on either side. Flanking the altar are seated figures of apostles, pro-



phets, and elders. At the north and south sides of the sanctuary are, respectively, five panels containing figures of angels, some carrying harps and other musical instruments, some swinging censers. The lower panels are very near the floor, and contain alternating cherubim and seraphim, painted the conventional colours, and standing erect facing the spectator. All the other figures turn towards the Agnus Dei, the whole idea evidently being based on the Te Deum, and the worship of the Lamb as shadowed forth in the Revelation of St. John the Divine. It is to be regretted that the cherubim and seraphim were not placed higher up, as they suffer artistically through being, so to speak, looked down upon. Commenting on the exterior of the tower and spire of St. Jude's, the two-light bell-chamber windows should be observed, which have slate louvres of great projection. The latter are cut through by the central shaft and come out almost beyond the outer face of the wall. This treatment seems inferior to the deep oak louvre-boards, set back with the bottom edge flush with the outer line of the return of the window-jamb. If there is not depth enough at the back of the mullions or jambs, a frame can receive the backs of the louvres and secure them. It would have been better not to have terminated the gabled tops of the tower buttresses just below the parapet. If they had been carried up a little higher, the buttresses and pinnacles would have been better connected.

(To be continued.)

### THE SOCIAL SCIENCE CONGRESS.

THE Congress of the British Association for the Promotion of Social Science commenced at Birmingham on Wednesday under the presidency of the Right Hon. G. Shaw-Lefevre, M.P. In the course of his address the President said:—

It is twenty-seven years since this association held its first meeting in this great centre of industry, under the presidency of its illustrious founder, Lord Brougham, and once again only in the interval has it met here, in 1868, immediately after the passing of the Reform Act, which gave so great an impulse to social legislation. In his address on the first of those occasions, Lord Brougham stated the objects of the Society to be the scientific study of the laws which govern men's habits as members of a community, and of the principles of human nature upon which the structure of society and its movements depend. A science may be defined as the statement of the relation of phenomena to one another. No one, I think, can doubt that the phenomena of social life are dependent on one another, and stand in the relation of causes and effects, and that it would be possible for us, if endowed with infinite powers of research, to determine exactly their relations. It is, however, the most difficult of all sciences, for the phenomena are so numerous and complex, each of them producing an effect on most, if not all the others, that it is not possible by observation or induction to distinguish their exact relations. What we endeavour to do in social investigations is to separate certain classes of facts, which appear to have a close connection, from others more remote, and, explaining them by what we know of the principles of human nature, to determine approximately their connection as causes and effects. Among the methods at our disposal are comparisons of the conditions of people at different times and different places, and the deduction from their agreement, or difference, of the causes which account for them. Again, what experiment is to physical research an act of legislation is to social inquiry, for we are able to compare the state of things before and after the change; and we conclude that the difference is due to the legislation. The conclusion, however, is only justified to the extent that all other conditions remain the same. In physics, the experimenter is able in many cases to make certain that all the surrounding conditions are unaltered, and he is justified in concluding that the change he observes is due to the one disturbing cause which he has introduced. But in social experiments we cannot make certain that other conditions are the same; on the contrary, we know that they are constantly changing, and that other causes are at work which may have their share in producing the results we observe. Our conclusions, therefore, are approximate only, and must be subject to many reservations as to the effect of other concurring causes. Even, however, with this reservation, we have every reason to believe that we can, in many cases, connect causes with their effects, and determine the result of the experiments which we make in legislation. In this sense the science is as important, if not more so, than any other, for on its conclusions depend the welfare and happiness of vast numbers of people as affected by their laws and institutions.

It has been usual for your President to comment, in the spirit I have referred to, on the principal legislation of the past year in furtherance of those social objects which are the proper subject of the Society. In the present year a retrospect of the past session discovers nothing but a blank. Owing to circumstances I need not advert to, the progress of many most important measures was suddenly cut short, and Parliament was prorogued, to meet again

early in the autumn. In the absence, then, of any such topic, it may be well, especially here, in the birthplace of the association, if I ask you to look back at what has been achieved during its existence, and chiefly during the period of great activity since our last meeting here, and to endeavour to trace its general effect on the relations of the State to individuals, and on the functions of the Government.

In any such retrospect it will at once appear that there have been two very distinct impulses to legislation: the one in the direction of limiting the powers and duties of the Government, of freeing the action of individuals from the influence and control of the State, and of sweeping away what remains in our social system and laws of obsolete survivals of organisation formerly thought useful and necessary; the other in the opposite direction of increasing the intervention of the State in our social arrangements, of multiplying the functions of the Government and adding greatly to the number of cases where the law prescribes the conduct of individuals or restrains their actions.

I will endeavour briefly to classify, under the different methods of State intervention, the work which has been done by Parliament during the period I refer to. Under the first head we may group those cases where the State has undertaken, or has enabled local authorities on its behalf to undertake, some function, duty, or business, either to the exclusion of private agencies or in competition with them. First, and most important among these, is that relating to education. The establishment of elementary schools to make up for the great and growing deficiency of schools supported by voluntary contributions, and the compulsion on all parents to send their children to school within certain ages, is the most distinct advance that has been made in this direction. Few authorities, even of the strictest school of economists, have raised any objection in principle to it. I shall not waste your time in defending it. No greater educational effort has ever, within so short a period, been made by a State. No agencies which could contribute to the cause have been neglected. Local rates, local contributions, the fees of parents, State grants, have all been brought in aid of it, and as a result, in England and Wales only, over 16,000,000*l.* have been spent on new schools, accommodation has been found for 2½ millions of children in excess of what existed twelve years ago, and the school teachers have been increased from 12,000 to more than 37,000. It is absolutely certain that without State aid, and without the contributions from local rates, this could not have been achieved. No voluntary efforts could have made up the leeway, or have supplied the grave deficiency which existed.

Local authorities have felt the same impulse to undertake functions which were formerly left to private agencies. Many corporations now supply water and gas to their ratepayers, and make a considerable profit by it. It should be noticed that in these matters there can be no competition among private agencies; the public interest will not permit of several companies breaking up the streets in competition with one another. The alternative is for the local authority to give to some single agency in the district a concession, or a regulated monopoly, with a restricted dividend and maximum price. Under such concessions, experience shows that there is no great inducement to adopt improvements or to cheapen the price to the public, and that local authorities can do the work as well, and can secure to the ratepayers the profit of the supply.

Lastly, I might briefly refer to the increasing tendency of late years on the part of the State and of local authorities to regard the interest of the community in matters of art, and to provide for the recreation of the people. The great increase of our national collections; the loans of their surplus works to local authorities; the establishment by many municipalities of museums, art-galleries, and free libraries; the recognition that it is within the functions of such authorities to provide public parks and recreation-grounds; the movement of late years for the preservation of commons; the Act for the preservation of ancient monuments; the great interest in our public and municipal buildings, are all evidences of the increased regard for the public welfare in this respect. In some quarters these are all included in the condemnation of State action, and regarded as a tendency towards Socialism. It is only, however, by denying altogether the corporate existence of society, it seems to me, that such objections can be sustained.

I have now gone through the chief heads of the many cases of late years where the State has made its influence felt, or has intervened to regulate the conduct of individuals, or has added to its functions. With respect to many of them, I believe that the strictest economists of the older schools would have no doubt as to their expediency; others are to be justified either on their own merits and by their results, or on the same grounds as many other similar measures, in earlier times, which experience has approved. With respect to some few it may perhaps be doubted whether we have not endeavoured to enter too minutely into regulations, and have exceeded the limits of a wise interference of the State. It would not, however, be difficult, taking a broad view of the action of Parliament, to justify by results the general drift of its legislation. In this sense I might refer to the general evidences of improved condition of the masses of the population.



## NOTES AND COMMENTS.

THE Cathedral of St. Paul's is just now well worthy of a visit. Cartoons of the prophets JEREMIAH, EZEKIEL, and DANIEL have been placed in the pendentives under the Whispering Gallery as an experiment. If approved, they are to be executed in mosaic. The figures have been painted by Mr. R. TOWNROE from small sketches left by the late ALFRED STEVENS. Like all STEVENS'S work, they show original ability. It is almost always difficult to adapt figures to triangular spaces, and in one of the Paris churches the painter found himself so perplexed that he made the garments flow into spaces on altogether different planes from those containing the figures. Cartoons for two of the bays of the dome itself have been placed in their positions. If carried out in mosaic, the gold and colours in Mr. POYNTER'S design will blend well; but it will be almost impossible without the aid of a good glass to make out the subjects represented. There is a band of ornament underneath, in which grapes and vine-leaves are introduced effectively; but the stars and crosses which are introduced for variety are far too severe. They are only adapted for the plainest class of paving. What the subject of the companion cartoon may be is a mystery; at least it cannot be deciphered from below. The border is excessively clumsy and commonplace, and is without any suggestiveness. We hope that nothing will be done towards the carrying out of the cartoons until the public have had an opportunity to see the designs on a winter's day. The committee have in the collection boxes in the church a good test of what is thought of the designs. We doubt if either of the large cartoons will do much towards increasing the subscriptions.

THE question of ownership in drawings is often arising under new aspects. A correspondent informs us that he has lately prepared three sketches of three buildings, and he furnished with them estimates of the probable cost. The buildings were not erected. Fees were paid for the designs, but the sketches have been retained, and the holders decline to part with them. In such a case has the architect any remedy? The people who retain the drawings can hand them over to a builder, and they will be converted into working drawings by him without any apparent cost, and without any further payment to the architect. But we doubt if the architect has any redress. A judge would consider the designs as being like artists' sketches, and would say that unless there was an agreement that they were to be returned the purchaser could retain them. In the case of a painter a copyright might be claimed on the design, and it could not be produced in any other form, but the extent of an architect's copyright has not been fully determined. The Copyright Commissioners appear to have had doubts as to its existence.

THE Welsh National Eistedfod has met this year at Liverpool, and, as usual, something was done towards the encouragement of native art. Mr. J. MILO GRIFFITHS obtained a prize for a statuette group. Last year he obtained the gold medal and a first prize at the Cardiff meeting. Mr. THOMAS, of Carnarvon, was awarded the prize for the best design for a pair of semi-detached cottages for quarrymen, the cost of the two being about 300*l*. There was only one competitor for the prize offered for a mythological or historical group in sculpture, and as the model was below the special value the prize was withheld. The chairman, Major CORNWALLIS WEST, was of opinion that painting was neglected in Wales. The cause was said to be the difficulty of maintaining art schools. It was suggested that whenever young students having ability were discovered, means should be found to send them to Mr. HERKOMER'S school at Bushey, where several branches of art were taught. Mr. CORNWALLIS WEST believes that Welsh architecture is on a par with the painting, and he besought Welsh architects to forbear disfiguring the beautiful hills and valleys with any more structures like those which are now being erected. There is so much mutual admiration at the Eistedfods, it is a gain to have such frank criticism, and the Welsh artists will do well to ponder the remarks.

THE following are the special questions at the Social Science Congress, in Birmingham, which are to be discussed in the art department:—(1) "Ought elementary instruction in drawing to be made an essential part of the national education?"—Papers by Mr. JOHN P. SEDDON, F.R.I.B.A.; Mr.

CHARLES G. LELAND, and Mr. ROWLAND HAMILTON. (2) "What is the value to the ear, the mind, the health, and the disposition of the young, produced by class instruction in music?"—Papers by Lady MACFARREN and Mr. W. DE MANBY SERGISON, Organist and Director of the Choir of St. Peter's, Eaton Square. (3) "How can a love and appreciation of art be best developed among the masses of the people?"—Papers by Mr. WALTER BESANT and the Rev. W. TUCKWELL, M.A. Voluntary papers will be read on the following subjects:—"Art education in schools," by Miss S. SOPHIA BEALE; "The place of art in the future political economy of the nation," by Mr. P. H. RATHBONE; "Are local governing bodies justified in expending large sums of public money for the purpose of beautifying towns and of providing parks, playgrounds, and other facilities for public recreation; and, if so, what are the lines on which they can most advantageously work?" by Mr. T. C. HORSFALL; "A suggestion for the better preservation of open spaces," by Mr. ROBERT HUNTER; "A day of leisure, art's opportunity," by Mr. THOMAS E. POWELL, London Trades' Council Delegate, and secretary of the Bookbinders and Machine-Rulers' Consolidated Union (London Branch); and "The Drama," by Mrs. KENDAL.

THE chapel of Lincoln's Inn is far from being a good specimen of English Gothic, but the Chancery lawyers admire it, and have lately gone to expense to make it look like a new building. The Chancellor's Court was built up against the chapel, and therefore no more than a part of the south wall was visible. Workmen are now employed in removing the north end of the Court, and in a short time the chapel will be isolated. Whatever merit it may have can be studied on all sides. We understand that the fate of the Chancellor's Court has not been determined. There is a proposal to convert it into a reading-room for law students, which has met with many supporters.

COLLECTORS are acquainted with specimens of the Belleek pottery, which often resemble shells in colour, but are generally badly designed. According to a story told by a travelling correspondent of the *Times*, the origin of the pottery was due to accident. Mr. BLOOMFIELD, a landlord in the district, was struck with the extreme brilliancy of the whitewash on the cottages in the neighbourhood, and examined into the reason. The cause was discovered to be the presence of a certain clay which seemed specially adapted to the manufacture of porcelain. Assistance and capital were obtained from Mr. MCBIRNEY, of Dublin, who is described as a wealthy china-merchant, but who in reality was a partner in a "monster house" for the sale of drapery. If artistic skill had been employed the pottery might have been successful, but the peculiar colour was supposed to be a sufficient attraction. The remarkable thing is that Belleek was ill-adapted for the production of the pottery which bears its name. The clay was there, and it was all that could be desired for quality, but in such insignificant proportions that it did not repay extraction. The factory might have been more profitably established at any other spot in the island, nearer to the places whence it drew its materials. The clay came from Devon or Cornwall, the feldspar was fetched from Cornwall, the flints from Antrim, the fuel from the Clyde.

AN exhibition of metal-work and jewellery will be held in Nuremberg next year, which is likely to be attractive. The Bavarian Government will offer prizes to exhibitors in the shape of artistically-designed gold and silver medals, to be struck by the Royal Mint at Munich, and the town of Nuremberg will also present every exhibitor with a medal in commemoration of the exhibition. The guarantee fund already subscribed amounts to 5,000*l*., and the Bavarian Government has promised every possible facility for the forwarding of exhibits, and has granted immunity from duty to all objects, whether entering or leaving the country, which are intended for exhibition. There will be also an historical section, which will contain exhibits of metal-work, beginning from the earliest periods of its production, and descending in successive steps to the manufactures of the present day. So anxious are the promoters of the exhibition to obtain a good representative collection under this head from every country, that they have signified their readiness to defray all expenses of freight, &c., and to insure such objects against fire or other risk, besides taking every precaution for their safe keeping while at Nuremberg.







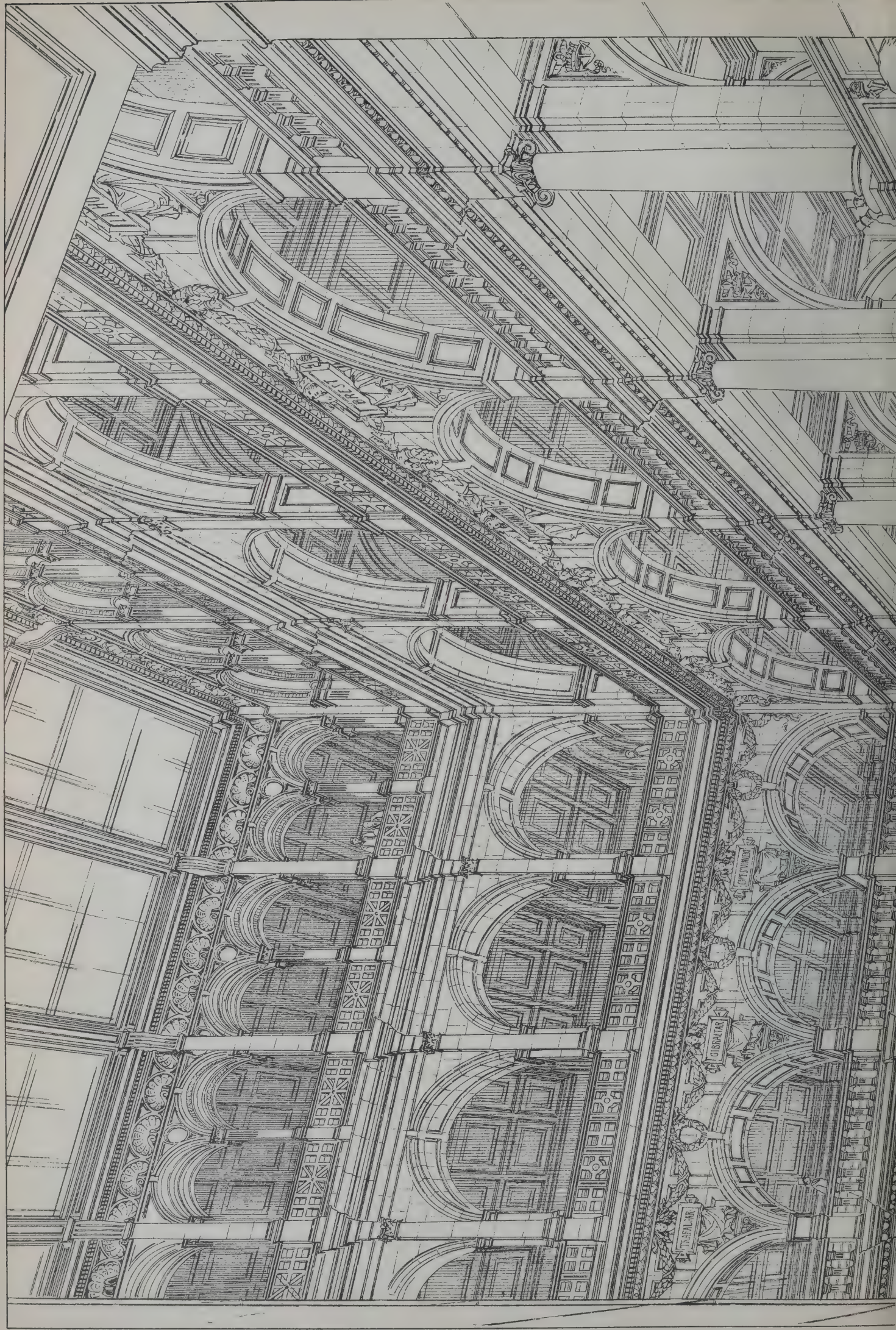


CONGREGATIONAL CHURCH, ACTON  
MESSRS SAVILLE & SON, ARCHITECTS.

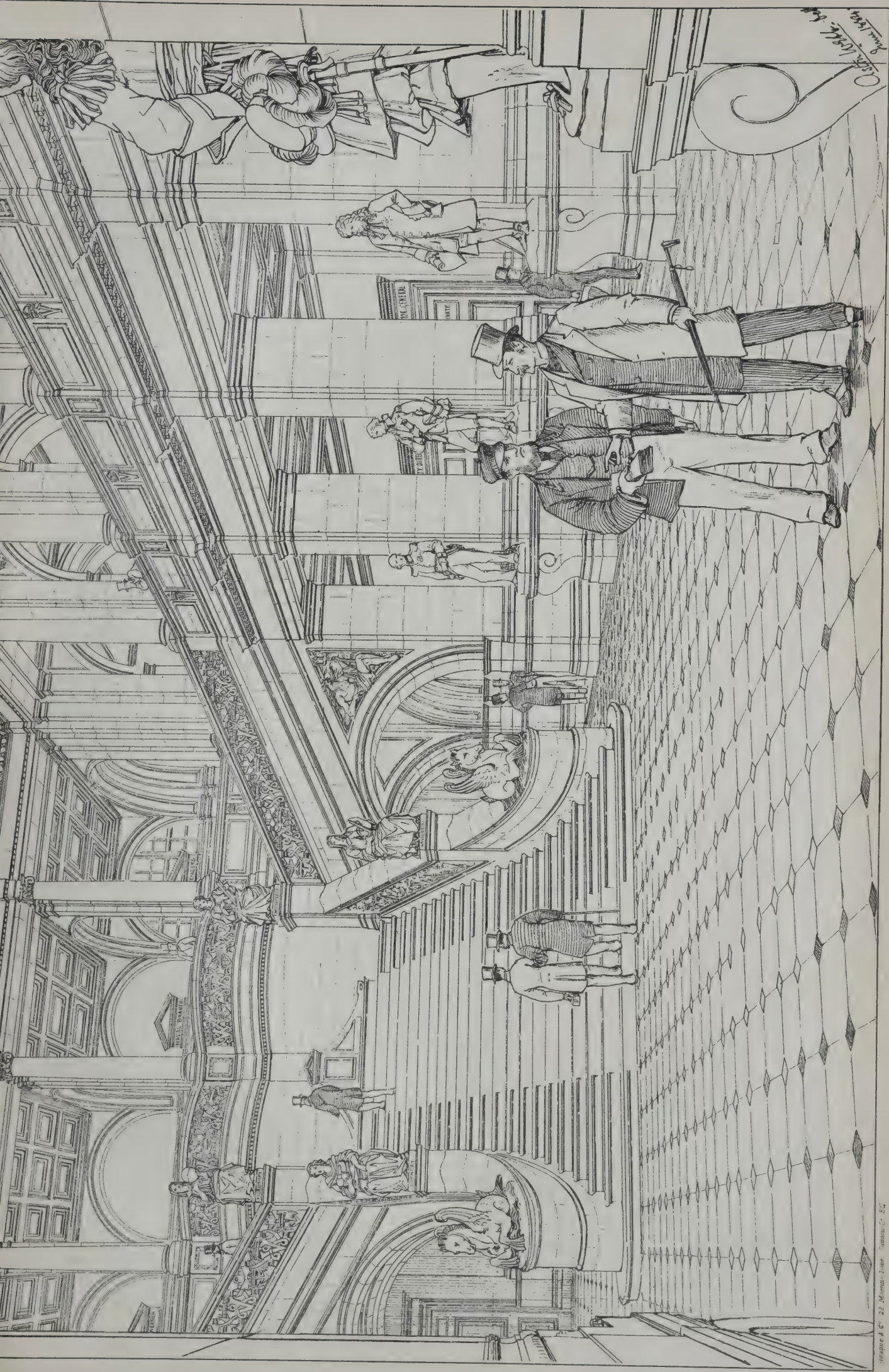












DESIGN FOR ADMIRALTY & WAR OFFICES

PRINCIPAL STAIRCASE.

BY MESSRS ASTON WEBB & E. INGRESS REID

























DESIGN FOR TOWN HOUSE

BY W. WALLIS BALDWIN.







## ILLUSTRATIONS.

DESIGN FOR PRINCIPAL STAIRCASE, ADMIRALTY AND WAR OFFICES.

A DRAWING of the grand hall and staircase was supplied by a few among the nine competitors. We publish this week one by Messrs. ASTON WEBB and E. INGRESS BELL.

DESIGN FOR MUNICIPAL BUILDINGS, NOTTINGHAM.

THE design by Mr. F. H. OLDHAM, F.R.I.B.A., of Manchester, which is published this week, was premiated in the late competition. The original drawing was exhibited in the Royal Academy this year.

CONGREGATIONAL CHURCH, ACTON.

UNTIL recently much inconvenience has been felt in this church on account of its imperfect acoustic qualities. Of the defects perceptible the most objectionable was a marked echo following the utterance of sounds. Remedial measures of various kinds had from time to time been adopted, but, probably owing to considerations of expense, had all been on too small a scale to promise much success. A short time ago, however, a special fund was raised, and a committee appointed to carry out a scheme of improvement of a more thorough character than had hitherto been attempted. Messrs. SAVILLE & SON were asked to examine the building and furnish suggestions for remedying the evil complained of. They found that the echo was chiefly attributable to the undue height of the nave, the form of the roof, and the large unbroken space in the body of the church, and recommended the introduction of a vaulted false ceiling below the existing roof, and of galleries in the aisles and across the west end. We are pleased to learn that the result is highly satisfactory both to the members of the congregation and to those engaged in the conduct of the services. Besides being acoustically advantageous, the new ceiling and galleries are admitted to be a distinct architectural improvement to the interior, and the galleries, moreover, provide 258 additional sittings.

The works have been executed, under the supervision of the architects, by Messrs. SPENCER & Co., of 77 Knightbridge Street, E.C., at a cost of about 1,200*l*.

Among this week's illustrations is a view of the interior as it now appears after the alterations.

DESIGN FOR A COUNTRY HOUSE.

THIS illustration is a reproduction of a water-colour, by Mr. WALLIS BALDWIN, which was exhibited this year at the Royal Academy.

## EVOLUTION IN ART.

A LECTURE was delivered on the 5th inst. by Mr. Frederic Harrison, in the course of which he asserted that Mr. Herbert Spencer was an unconscious imitator of Auguste Comte, the synthetic philosophy being only an attempt to play a new tune on Comte's instrument. Mr. Spencer in his reply referred to an essay he published in 1854 as containing the rudiments of his system, and in which there is nothing that is attributable to the French philosopher. The theory then set forth was that every active force produces more than one change or effect, the implication being that there is a continuous multiplication of effects of which increasing heterogeneity is the result. Some long letters from Mr. Spencer and Mr. Harrison have appeared in the *Times*, and the latter promises a thorough examination of the two systems. When Mr. Spencer says that he is not indebted in any way to Comte, his statement should be accepted without the least hesitation. The controversy has given fresh interest to the early thoughts of Mr. Spencer, and we accordingly give an extract from the essay of 1854, not only to exemplify the theory of the author respecting the evolutionary aspects of art, but also to give an opportunity to Comtists to discover anything in the same spirit in their philosopher's works. One of the shortcomings of the founder of Positivism was his coldness in regard to art:—

Written language is connate with painting and sculpture; and at first all three are appendages of architecture, and have a direct connection with the primary form of all government—the Theocratic. Merely noting by the way the fact that sundry wild races—as, for example, the Australians and the tribes of South Africa—are given to depicting personages and events upon the walls of caves, which are probably regarded as sacred places, let us pass to the case of the Egyptians.

Among them, as also among the Assyrians, we find mural

paintings used to decorate the temple of the god and the palace of the king (which were indeed originally identical), and as such they were governmental appliances in the same sense that state pageants and religious feasts were. Further, they were governmental appliances in virtue of representing the worship of the god, the triumphs of the god-king, the submission of his subjects, and the punishment of the rebellious. And yet again they were governmental as being the products of an art revered by the people as a sacred mystery.

From the habitual use of this pictorial representation there naturally grew up the but slightly modified practice of picture-writing—a practice which was found still extant among the Mexicans at the time they were discovered.

By a process of abbreviation analogous to that which has been abundantly exemplified in our own written and spoken language, the most familiar of the pictured figures were successively simplified; and ultimately there grew up a system of symbols, most of which had but a distant resemblance to the things for which they stood. The inference that the hieroglyphics of the Egyptians were thus evolved is confirmed by the fact that the picture-writing of the Mexicans was found to have given birth to a like family of ideographic forms; and among them, as among the Egyptians, these had been partially differentiated into the *kuriological* or imitative, and the *tropical* or symbolic, which were, however, used together in the same record. In Egypt written language underwent a further differentiation, whence resulted the *hieratic* and the *epistolographic* or *enchorial*, both of which can be clearly affiliated upon the original hieroglyphic. At the same time we find that for the expression of proper names, which could not be otherwise conveyed, phonetic symbols were employed, and, though it is alleged that the Egyptians never actually achieved complete alphabetic writing, yet it can scarcely be doubted that these phonetic symbols, occasionally used in aid of their ideographic ones, were the germs out of which alphabetic writing grew. Once having become separate from hieroglyphics alphabetic writing underwent numerous differentiations; multiplied alphabets were produced, between most of which, however, more or less connection can still be traced. And in each civilised nation there has now grown up for the representation of one set of sounds several sets of written signs used for distinct purposes. Finally, through a yet more important differentiation came printing, which, uniform in kind as it was at first, has since become multifarious.

While written language was passing through its earlier stages of development, the mural decoration, which formed its root, was being differentiated into painting and sculpture. The gods, kings, men, and animals represented, were originally marked by indented outlines, and coloured. In most cases these outlines were of such depth, and the object they circumscribed so far rounded and marked out in its leading parts, as to form a species of work intermediate between intaglio and bas-relief. In other cases we see an advance upon this. The raised spaces between the figures being chiselled off and the figures themselves appropriately tinted, a painted bas-relief was produced. The restored Assyrian architecture at Sydenham exhibits this style of art carried to greater perfection. The persons and things represented, though still barbarously coloured, are carried out with more truth and in greater detail; and in the winged lions and bulls used for the angles of gateways, we may see a considerable advance towards a completely sculptured figure, which, nevertheless, is still coloured and still forms part of a building. But while in Assyria the production of a statue proper seems to have been little if at all attempted, we may trace in Egyptian art the gradual separation of the sculptured figure from the wall. A walk through the collection in the British Museum will clearly show this, while it will at the same time afford an opportunity of observing the evident traces which the independent statues bear of their derivation from bas-relief; seeing that nearly all of them not only display that union of the limbs with the body which is the characteristic of bas-relief, but have the back of the statue united from head to foot with a block which stands in place of the original wall. Greece repeated the leading stages of this progress. As in Egypt and Assyria, these twin arts were at first united with each other and their parent, Architecture, and were the aids of Religion and Government. On the friezes of Greek temples we see coloured bas-reliefs representing sacrifices, battles, processions, games—all in some sort religious. On the pediments we see painted sculptures more or less united with the tympanum, and having for subjects the triumphs of gods and heroes. Even when we come to statues that are definitely separated from the buildings to which they pertain, we still find them coloured; and only in the later periods of Greek civilisation does the differentiation of sculpture from painting appear to have become complete.

In Christian art we may clearly trace a parallel re-genesis. All early paintings and sculpture throughout Europe were religious in subject, representing Christs, crucifixions, virgins, holy families, apostles, saints. They formed integral parts of church architecture, and were among the means of exciting worship, as in Roman Catholic countries they still are. Moreover, the early sculptures of Christ on the cross, of virgins, of saints, were coloured; and it needs but to call to mind the painted madonnas and crucifixes, still abundant in Continental churches and highways, to perceive the



significant fact that painting and sculpture continue in closest connection with each other where they continue in closest connection with their parent. Even when Christian sculpture was pretty clearly differentiated from painting, it was still religious and governmental in its subjects—was used for tombs in churches and statues of kings; while at the same time painting, where not purely ecclesiastical, was applied to the decoration of palaces, and, besides representing royal personages, occupied itself almost wholly with sacred legends. Only in quite recent times have painting and sculpture become entirely secular arts. Only within these few centuries has painting been divided into historical, landscape, marine, architectural, genre, animal, still life, &c., and sculpture grown heterogeneous in respect of the variety of real and ideal subjects with which it occupies itself.

Strange as it seems, then, we find it no less true that all forms of written language, of painting, and of sculpture have a common root in the politico-religious decorations of ancient temples and palaces. Little resemblance as they now have, the bust that stands on the console, the landscape that hangs against the wall, and the copy of the *Times* lying upon the table, are remotely akin not only in nature but by extraction. The brazen face of the knocker which the postman has just lifted is related not only to the woodcuts of the *Illustrated London News*, which he is delivering, but to the characters of the *billet-doux* which accompanies it. Between the painted window, the prayer-book on which the light falls, and the adjacent monument there is consanguinity. The effigies on our coins, the signs over shops, the figures that fill every ledger, the coat-of-arms outside the carriage panel, and the placards inside the omnibus, are in common with dolls, blue-books, paper-hangings, lineally descended from the rude sculpture-paintings in which the Egyptians represented the triumphs and worship of their god-kings. Perhaps no example can be given which more vividly illustrates the multiplicity and heterogeneity of the products that in course of time may arise by successive differentiations from a common stock.

Before passing to other classes of facts, it should be observed that the evolution of the homogeneous into the heterogeneous is displayed not only in the differentiation of painting and sculpture from architecture and from each other, and in the increased variety and speciality of the subjects they embody, but it is further shown in the structure of each separate work. A modern picture or statue is far more heterogeneous in its constitution than an ancient one. An Egyptian sculpture fresco represents all its figures as on one plane—that is, at the same distance from the eye—and so is less heterogeneous than a painting that represents them as at various distances from the eye. It exhibits all objects as exposed to the same degree of light, and so is less heterogeneous than a painting which exhibits its different objects and different parts of each object as in different degrees of light. It uses scarcely any but the primary colours, and these in their full intensity; and so is less heterogeneous than a painting which, introducing the primary colours but sparingly, employs an endless variety of intermediate tints, each of heterogeneous composition, and differing from the others not only in quality but in intensity. Moreover, we see in these aboriginal works a great uniformity of conception. The same arrangement of figures is continually represented—the same actions, attitudes, faces, dresses. In Egypt the modes of representation were so fixed that it was sacrilege to introduce a novelty; and indeed it could only have been in virtue of a fixed mode of representation that a system of hieroglyphics became possible. The Assyrian bas-reliefs display parallel characters. Deities, kings, attendants, winged figures and animals are severally depicted in like positions, holding like implements, doing like things, and with like expression or non-expression of face. If a palm grove is introduced, all the trees are of the same height, have the same number of leaves, and are equidistant. When water is represented, each wave is a counterpart of the rest; and the fish, almost always of one kind, are evenly distributed over the surface. The beards of the kings, the gods, and the winged figures are everywhere similar, as are the manes of the lions, and equally so those of the horses. Hair is represented throughout by one form of curl. The king's beard is quite architecturally built up of compound tiers of uniform curls, alternating with twisted tiers placed in a transverse direction, and arranged with perfect regularity; and the terminal tufts of the bulls' tails are represented in exactly the same manner. Without tracing out the like traits in early Christian art, in which, though less striking, they are still visible, the advance in heterogeneity will be sufficiently manifest on remembering that in the pictures of our own day the composition is endlessly varied: the attitudes, faces, expressions, unlike the subordinate objects, different in size, form, position, texture, and more or less of contrast even in the smallest details. Or if we compare an Egyptian statue seated bolt upright on a block, with hands on knees, fingers outspread, and parallel eyes looking straightforward, and the two sides perfectly symmetrical in every particular, with a statue of the advanced Greek or the modern school, which is symmetrical in respect of the position of the head, the body, the limbs, the arrangement of the hair, dress, appendages, and in its relations to neighbouring objects, we shall see the change from the homogeneous to the heterogeneous clearly manifested.

## LICHFIELD CATHEDRAL.

THE restoration of the noble west front of this cathedral is fast progressing, and several of the still vacant niches will shortly be filled with the statues intended to replace the old series. The arcade of kings, which forms such a striking feature in the front, will be soon completed, those of Penda, Wulfere, Ethelred, Offa, Egbert, Ethelwolf, Alfred the Great, Edgar, Canute, Edward the Confessor, Richard II., &c., being *in situ*, while those of King David, William I. and II., Henry I., II., and III., and Edward I. will shortly leave the studio of Mr. Bridgman, in Lichfield. A brief *resumé* of the other great groups of the west front will not be uninteresting. In the upper stage of the south-west tower are Methuselah, Noah, Shem, Daniel, and Job, with a small figure of St. Anthony over the belfry window on the south side. On the west front of this tower are Isaiah, Zephaniah, Jonah, Hosea, Ezekiel, Haggai, Micah, and Joel. The upper stage of the north-west tower is devoted to scriptural women—viz., Eve, Sarah, Rebecca, Rachel, Deborah, and Hannah; the first stage of the west front to St. Clement and St. Werburgh; and the central gate to the archangels Michael, Raphael, Gabriel, and Uriel. The figures on the moulding of the central doorway are Joseph, Judah, Shem, Noah, Enoch, Seth, and Adam on one side, the Virgin and Child, David, Jesse, Jacob, Isaac, and Abraham on the other. Occupying a similar position in the doorway of the south-west tower are Wilfred, Cuthbert, St. Augustine, Gregory, Paulinus, Theodosius, Aidan, &c. The figures of the bishops of the diocese include those of Bishops Hacket, Clinton, Lonsdale, Patteshull, Langton, and Selwyn. St. Chadd, the patron saint, occupies his old place in the centre of the whole.

## ART TEACHING IN BIRMINGHAM.

THE session of the Birmingham School of Art was opened on the 15th inst., when the headmaster, Mr. E. R. Taylor, delivered an address. He referred to the success of the students. In the last national competition they gained 43 medals and prizes—more than one-tenth of the whole awarded to the 201 schools of the United Kingdom. South Kensington had 21 awards, or less than half the number of Birmingham. Although they had not obtained a gold medal, they were the highest in silver and bronze medals and in prizes. Theirs was as large a school as South Kensington; but it should be stated that at South Kensington the students were mostly advanced and studying all day long, while about three-fourths of the Birmingham students were elementary, and studied only in the evening after a hard day's work. In the preliminary examinations of this national competition they had 143 prizes. The returns of this competition were not issued, so that they could not compare their success with that of other schools; but, so far as he could ascertain from the Blue Books, nothing approaching this number had ever been gained by one school. All their modelling students except one had passed the Government examination. They had a total this year of 239 medals and prizes and 384 certificates. Analysing the 143 prizes first obtained on the work of the sections sent up to South Kensington, he found that they showed the wide scope of the school, as an educational institution, as a school of advanced art, and as a school of industrial art. Thirty-nine of the awards were for design, and its collateral studies, not including modelled designs; 12 were for modelling (a great success for so small a class); 38 for painting; 18 for life; 27 for antique; 10 for more elementary studies. They had some good seed for the gold medals next year, but they would have fearful hard work to maintain the total of awards obtained this year.

Passing on to the principles and methods which should be followed in an art school, Mr. Taylor said that art had had many definitions. It might be compared to the chemical combination of two substances, by which a new substance was formed. It was the beauty in nature and the humanity of man combined. Man must be receptive, or, speaking chemically, have an affinity, and at the same time be an active influence on the result, though this was best where he was so unconsciously. Raphael never produced a Madonna so fine as his model; Turner never painted a landscape more glorious than his eyes saw; not a designer invented lines or combinations of colour equal to what he had seen in nature. One man, however, would degrade everything he touched, whether a lovely face, a landscape, a chalice rich with jewels, or a simple cup and saucer; while another would elevate and refine them, and both do it unconsciously. All art bore this stamp of humanity, and it was this expression of various minds and souls in form and colour which constituted the art of which they spoke. They had, therefore, a difficult task not only to see and to do, but what to see and what to do. By placing before them natural forms which were beautiful, and those beautiful creations of past ages which had been spared to them; by the discipline of the schoolroom; by seeking for their own self-culture, not only from books, but in a constant effort to develop in their lives whatever there was in them of grace and purity; and by noting for them what was graceful and pure in their work or their model, their art teachers might be able



to do something to counteract those sordid surroundings which were the legacy of the first half of this century, and to revive that silver thread which brightened the lives of Englishmen from the ninth to the sixteenth century, and though dimmed, continued even later, but which the narrowness and misdirected zeal of our immediate forefathers destroyed.

Art culture and traditions, while dead in England, survived on the Continent, though in debased forms; but in spite of this disadvantage the present English revival was such as already to awaken the admiration and jealousy of our neighbours. They had a great respect for our system and its results. The tide was already turned, and instead of everything artistic being imported from France and Italy, our art work and art workers were now sought for in those countries. This was the result of flooding art knowledge and power among all classes—the consumers as well as the producers. Where we were still lacking as compared with our neighbours was in the desultory and optional teaching of drawing in our elementary and public schools. Drawing must begin in the infant schools if art was to be part of our national life, or the education of our children be at all perfected. Its elements were easier to teach than reading or writing, and the time was not far off when every English boy or girl would be able to draw and model better than he could read or write. Mr. Taylor then described in detail the course of teaching now adopted in the Birmingham School of Art, pointing out the use of its various departments, and making various suggestions of general application by which many difficulties might be overcome, and serious errors avoided. The new school of art buildings would, he pointed out, enable many things to be better done than at present, and if only our artisans and others would continue to profit by the educational advantages now so amply provided in the town, the time would soon come when Birmingham would rise still higher in her artistic productions, both industrial and fine art; but his hope over and above this was that they might live to see the time when beauty and its humanising influence might be felt in every home in Birmingham. That they might have part in realising that let them take with them the three words—conscientious, workmanlike, graceful.

### CHURCH RESTORATION.

THE Secretary of the Incorporated Society for Promoting the Enlargement, Building, and Repairing of Churches and Chapels, has written the following remarks on the position of the Society with regard to church restoration:—

I am afraid it must be admitted that in the early days of the Society the money was not spent as it would be now. But I do not think the Society was to blame. It was in advance of the age. Its object was to provide additional church accommodation, and it was its misfortune, not its fault, if ecclesiastical architectural taste was at such a low level that many and many magnificent and interesting architectural features could be ruthlessly swept away to make room for the erection of a huge painted deal gallery; or a very beautiful though small parish church could be destroyed to be supplanted by a church of the "Gothic sort" with cast-iron thirteenth century pillars coloured white.

*Mais nous avons changé tout cela.* At the present time, and for some years past, no grant is made unless the plans are first passed by a committee of twelve of the leading men in the profession, including such well-known names as Christian, Pearson, and Bodley. The misfortune is that such a very large number of the plans submitted are below mediocrity. And what is the cause of this? It very frequently happens that a local committee is formed to "restore" the parish church. Possibly a leading member of this committee has a friend in the profession; or there is a local architect, accustomed to building rows of houses, with an occasional assembly-room, and the job is given to him, in order, it is thought, to encourage local talent, or to save expense.

Now, I do not hesitate to say that there is no branch of architecture that requires more careful study and education than that of church restoration. In order that the work may be properly carried out a man must be a lover of antiquity, a painstaking archæologist, a student of history, and, not least, a thorough churchman.

In ninety-nine cases out of a hundred it is impossible to restore a church to what it was originally, because in all probability the church contains work of one kind or another of many different periods, each of historical interest; and, in any case, guess work must be the guide to a very great degree.

It seems to be a fault not uncommon with many church restorers to try and spend as much money as possible, so as to get the church to look neat and trim, and to make believe that it has just come from the hands of the original designer. But is it not the truest and in every way the wisest plan to do as little as possible? Of course there are some things necessary. No one would advocate the retention of Georgian galleries and high pews with all the paraphernalia of carpets, arm-chairs, scrapers, and locks; and the actual repairs caused by past neglect and the decay of time must be attended to; but I would ask, is not very much done that is needless and wasteful, to say nothing of bad taste, in

scraping all the signs of age from old stones, doing away with slab pavement to lay down vulgar encaustic tiles, removing the plastering off walls so as to point the rubble, and even in certain cases the brushing off of the much-abused whitewash? I am sure that many thousands of pounds are often uselessly spent, not in church ornament—by all means let those who will devote their means lavishly to the adornment of God's house—but in the reckless destruction of all records of the past, whether eighteenth century or thirteenth century. Our committee of architects, who give their services gratuitously, aim at guiding, so far as they can, all church reparation in a truly conservative spirit, but they cannot make good plans out of bad ones.

### ROYAL ALBERT EDWARD INFIRMARY, WIGAN.

IT will be remembered that a new infirmary was erected in this town about ten years ago, and opened by H.R.H. the Prince of Wales, who paid a visit at the same time, accompanied by the Princess, to Lord Crawford at Haigh Hall, near the entrance-lodge of which the infirmary was erected. This building provided accommodation for about 100 beds, and the success of the undertaking has been very complete and satisfactory to those who supported and inaugurated it. So much is this the case that it has been found necessary to enlarge it, and a detached wing is now in course of erection containing accommodation for twelve special wards for severe cases, children's wards, and a separate nurses' home of twelve rooms, with the necessary kitchens, lavatories, bath-rooms, &c. These will be connected to the main block by a glazed corridor, which it is proposed to make into a winter garden and exercising place for the convalescent patients. Mr. Thomas Worthington, of Manchester, was the architect of the original building, and Messrs. Worthington & Elgood are now carrying out the additions in a similar manner. Mr. J. Preston, of Wigan, is the builder employed, whose contract for the portion of the works already decided upon amounts to about 3,600*l.*, exclusive of the internal fittings and other work.

### QUEEN MARY'S HOUSE, JEDBURGH.

THE house known as Queen Mary's House, Jedburgh, is now tenantless, after being occupied for centuries. This has been brought about by the late tenant, Mr. A. C. Mounsey, rector of the grammar school, removing to the new schoolhouse at the Friary, while no other seems to covet the historical old mansion as a residence. When or by whom the house was built is not known. Some have held that it was one of the six bastel-houses alluded to by the Earl of Surrey in his account of the storming of Jedburgh in 1523. In the records of the Privy Council it is called "the house of the Lord Compositor;" but in 1566 it would seem to have been in the possession of the Kerrs, as among other payments made by the unfortunate queen at that time was one of forty pounds to Lady Fernherst for the use of the house during her abode in Jedburgh. It appears also to have belonged at one time to the Wigmores, from a carved stone in the front wall, over an arched doorway now built up. On this stone is a shield having on the dexter side the arms of Wigmore of that ilk, with the motto—"Avis la fin;" and on the sinister side, those of Scott of Thirlston, Buccleuch or Howpalsley, not Harden, with the motto—"Solum deo confido." In the end of the last century the property belonged to Provost Dr. Lindsay, whose daughter was the "Sweet Isabella Lindsay" of Burns. It is now owned by Colonel Armstrong, St. Petersburg. The house, which is three storeys in height, and thatched, with corbie steps at the gable-heads, is composed of a principal building in front, with a square tower at the back, resembling a border peel of the smaller type. The lower storey is all arched with stone, as is also the upper storey of the tower. A broad stone stair leads to the second floor, while leading to the third is a narrow spiral one, also of stone. When Queen Mary came to Jedburgh in October 1566, attended by her Ministers of State, her law officers, and many of her nobles, to hold an assize, she took up her abode in this house, and on her returning from a visit to Bothwell at Hermitage Castle, at the close of the assize, she was attacked by a fever which almost terminated fatally. The room in which she lay during this serious illness is, according to tradition, a small apartment in the back part of the house; but Miss Strickland, in her work on "The Queens of Scotland," says, in regard to this point, that "the spacious suite of apartments on the opposite side of the staircase, one of which still bears the name of the guard-room, is more likely to have been occupied by royalty as ante-room, privy chamber, and bedroom." There is still shown to visitors a piece of tapestry hangings, representing the meeting of Jacob and Esau, said to have been wrought by Queen Mary's maids during the royal visit. The late Dr. Robert Chambers, while referring to this house in his "Pictures of Scotland," says:—"With its screen of dull trees in front, the house has a somewhat lugubrious appearance, as if conscious of connection with the most melancholy tale that ever occupied the page of history."



## ST. MARK'S, VENICE.

THE following account of a recent incident in the opposition to the restoration of St. Mark's, Venice, is given by Mr. Wallis, the honorary secretary, St. Mark's Restoration Committee:—

The destruction of the tessellated pavement of the basilica having been successfully resisted, thanks, in a great measure, to the earnest protest of the late Mr. Street, the restoring authorities lately determined to take the inside marble panelling in hand. It will be remembered that it possessed qualities of tone and colour that time alone can impart. These it was proposed to remove and to restore the decorative panelling to its pristine condition, to use the language of the restorers. As soon as it was known that the workmen had commenced operations an alarm was raised in the Venice papers. The Venetian artists at once organised an opposition. They protested as a body, with the result that the projected flaying has been abandoned. Their action was entirely spontaneous, and without the interference of this committee.

Besides announcing a fact of good augury for the future, permit me to point out that it affords a justification for the creation of the committee in the first instance. Its object necessarily interfering with the rapacity of some Venetian architects, naturally entailed the opposition, not only of these, but of others who profited by the works. A cry of foreign interference, by whom fomented it is unnecessary to inquire, was raised in certain journals. This, however, when it was seen how many distinguished Italians joined the committee, soon subsided. As the first protest against the desecration of St. Mark's came from an Englishman, so, doubtless, the committee owes its origin to English action. When Mr. Ruskin first raised his voice against the restoration of the building of which he has written such a splendid record, he stood alone. His words, however, soon found an echo in the Peninsula. So, when at an especially critical period, when it was seen that the west front of the Basilica was in danger, our habit of association having naturally suggested the formation of a committee, the movement very soon received the cordial assent of those Italian students of art and history who were alive to the value of their public monuments. Now, at least at Venice, they have shown that on an emergency they can act with promptness and decision.

It will be regrettable if the present awakening to the disastrous effect of restoration in England dies out without any practical result. Without organisation the most spirited denunciation of malpractices is of little avail. Where one man is bent on working out his fad, and another puts money in his pocket by helping him to do so, the indignant protests of individuals are powerless, the interested parties being perfectly well aware they have only quietly to bide their time. They bow before the storm as it passes, and placidly finish the business at their leisure when the wrath of their opponents has evaporated.

The Society for the Protection of Ancient Buildings is doing good work, but which could be materially helped by local action. If organisations were formed in every country showing the townsfolk and villagers what of the legacy of their ancestors there is still left that is precious and beautiful, it can scarcely be doubted but local patriotism will act as efficiently here as it has recently done in Venice.

## GLASGOW ARCHÆOLOGICAL SOCIETY.

IT has been the almost invariable custom of this society ever since its institution to devote a day annually to visiting and carefully examining some ancient edifice or other object of antiquarian interest within easy reach of Glasgow. In this way there have been visited within the last ten years of the society's history Linlithgow Palace and Church, Castle Campbell, the castles of Tantallon, Dirleton, Caerlauerock, Doune, Rothsay, and Murthly, Crossraguel Abbey, the cathedrals of Dunkeld and Dunblane, Dunfermline Abbey and Palace, the Roman camp at Ardoch, and the eastern portion of the Wall of Antoninus. The excursion this year took place on the 9th inst., the day's programme including the castles of Borthwick and Crichton, in the neighbourhood of Dalkeith. A careful inspection of Borthwick Castle was made, in course of which Mr. Dalrymple Duncan read a paper descriptive of its history. Borthwick Castle is the largest specimen in Scotland of the Border keep, or square tower, and is also notable for the fact that, although at the period of its erection the owners of similar structures were in general grouping new masses of building round the original edifice, the object of its founder appears to have been to secure all the space and accommodation of these clusters of buildings within the four walls of his simple square block. So large is the fortress that it has been often mistaken at a distance for a Norman keep, of which it is well known there is no specimen north of the Tweed. Its dimensions are as follows:—74 feet by 69 feet outside the walls, the latter being 14 feet thick near the bottom. The battlements are 90 feet high, and the roof is 110 feet. The great hall is 51 feet long and 24 feet wide. On the motion of Mr. Murdoch, a hearty vote of thanks was awarded to Mr. Dalrymple Duncan for his paper. The members present also unanimously expressed their indebtedness to Mr. Honeyman for his explanations of the architectural characteristics of the castle.

A short visit was paid to the parish church of Borthwick, of which, however, only the south transept is old. Here the attention of the members was mainly directed to the fine recumbent statues of the first Lord Borthwick and his lady. In consequence of the time which had been necessarily devoted to the castle and church of Borthwick, and that Crichton Castle was ascertained to be farther from Dalkeith than had been anticipated, the visit to the latter very interesting edifice had to be deferred. The party therefore drove direct to Dalkeith, and on reaching Edinburgh dined together in the Windsor Hotel—Mr. Honeyman in the chair.

## AN AUSTRALIAN COUNCIL CHAMBER.

THE Sydney authorities are making efforts to secure the completion of the new town hall during the centennial year of colonial settlement—1888. That portion of the building which is situated in the very heart of Sydney, although formerly it was portion of the suburbs, has been finished, and presents an imposing appearance. The council chamber, which was recently used for the first time, is 42 feet long by 30 feet wide, and its height is 27 feet, and it is provided with a gallery 30 feet by 12 feet, which is intended for such of the public as desire to watch the progress of aldermanic business. The chamber is furnished with a canopied mayoral throne, also rows of portly chairs for the aldermen, and behind the latter are cushioned benches upon elevated platforms. The chairs are adjacent to a large table, near to which are tables for the town clerk and representatives of the press. All of the furniture is of rich design, and cedar wood is used in its construction. The walls are cemented and enriched by coupled columns, with entablatures and cornices. The floor consists of oak parqueterie with a fancy border, and heavy curtains are to be suspended in front of the doors to protect the inmates from draughts. The grand staircase leading to the chamber is a handsome structure. The steps are of slate, the strings of white Sicilian marble, the newels of rouge royal marble from Belgium, and the balustrade is of wrought-iron artistically designed, with cedar handrails. The town hall, in which public meetings and other gatherings are to be held, will be one of the largest in the world, and the interior will compete with any edifice of a similar character in the United Kingdom.

## CHURCH BUILDING IN IRELAND.

A NEW church was consecrated in the diocese of Dublin on the 11th inst., for the parish of Kildrough (Albridge). It occupies the site of a conventicle kind of structure erected about seventy years ago, which had four square walls, a flat plastered ceiling, galleries on three sides, and parlour high-backed pews, eight of which were provided with private fireplaces. The new church, the end walls of which stand on the old foundations, consists of a nave, 60 feet by 25 feet; a north aisle 15 feet wide, and a north-west chapel, built to contain a large organ; a chancel, 29 feet by 21 feet, with vestry, furnace rooms, porches, &c. An old tower has been left standing, and has been remodelled. The whole building has been carried out in consistent Early Decorated detail, the architect being Mr. Thomas Drew, R.H.A., diocesan architect for Down, &c. The special gifts to the church have been elaborate, and all designed by the architect. They consist of a font in marble stone and alabaster, a pulpit in stone and marble of elaborate design, credence table, carved by Messrs. Sharpe & Emory, of Dublin; a fine organ, recently built by Messrs. Foster & Andrews, of Hull, at a cost of 800*l*.; brass altar rails, by Messrs. Brown & Downing, of Birmingham; carved oaken desks, by Whippel & Co., of Exeter; brasses by Lavers, Barraud & Westlake, of London; heating by Bacon & Co.; bells rehung by Taylor & Co., of Loughborough; oak altar by Hems, of Exeter; encaustic tiling by Craven, Dunnill & Co. Red Whitehaven stone has been used for the cut stone of the exterior, and Bath stone for the interior. The general contractor for the works has been Mr. Samuel Bolton, of Dublin, and the cost about 3,000*l*.

Church building, improvements, and restorations of the buildings of the Disestablished Church of Ireland progress actively in spite of the present depression of property among the landowners, and the extinction of the great fund which was annually available for church building under the former Ecclesiastical Commissioners. This new church is within a mile or two of a costly Romanesque church in the adjoining parish of Clare, erected from voluntary contributions, and consecrated within the last twelve months. It is remarked that since the cessation of grants from the public fund, amounting to 50,000*l*. or 60,000*l*. per annum, which the Established Church in Ireland had to draw on previous to 1870, and since church building has become a matter of voluntary effort, the characteristics of the architecture and richness and costliness of the churches built have been vastly improved, and the poverty-stricken style of building encouraged and promoted by the old Ecclesiastical Board, under a vicious system of providing the maximum number of "sittings" at the minimum cost per head, is



a thing of the past. There prevailed throughout Ireland twenty years ago a monotonously bad and objectionable type of church architecture, affected by the then Established Church—a type which, in the difficulty of relegating to any style in particular, used to be known as the “neat and appropriate.” The Disestablished Church community may be congratulated on better quality of architecture if less in quantity is produced per annum, and on putting their hands in their pockets to pay for it with a liberality and spirit which was unknown in the state-aided days.

### THE SAXON TOWER AT EARL'S BARTON.

A MEETING of the committee for the restoration of Earl's Barton Church was held lately, when the following report was read from Mr. J. L. Pearson, R.A.:—“I have carefully examined the tower of your church, and I am of opinion that although the arch on its eastern side is greatly distorted by settlements, and by the consequent unequal pressure upon it, that yet it is not necessary to take it out and to rebuild it. The abutment on the south side of it has yielded considerably, but not in recent years, and the indication of cracks, to which my attention was directed, do not arise from any further giving way of this abutment, but are the result of the lateral spreading of the arch, in consequence of the stones in the outer rings not having any bond, and the spaces between them being filled in with loose rubble. This rubble, being compressed by the weight upon it has, as a matter of course, forced the masonry out of its place in the manner I have named, and that this is so may be clearly seen by the widening out of the arch. I would recommend that the walls of the tower should be grouted in with liquid Portland cement, or blue lias (Barron) lime and sand, immediately over and around this arch, and from both sides of it; that then, after carefully shoring it, one or two of the most defective arch-stones be removed and replaced with sound stone, and that the open joints elsewhere be wedged up, and solidly run in with cement. I would further recommend that the whole of the walls of the tower be treated in the same way, and in a regular manner, beginning at the bottom, and at every three feet in height be solidly grouted, and, if possible, on each side of the walls, care being taken not to disturb more of the facing than is absolutely necessary. It would be well to place the vessel containing the grout at some little elevation above the point where it is intended to introduce it, with a pipe attached to it, so as to have the advantage of the pressure which this elevation would give for forcing the grout into the walls. I am quite sure that if this process be well and carefully carried out, that then the tower will continue to stand as it now is for many future generations. The walls externally were undoubtedly intended to be covered between the dressed stonework with a thin coat of plaster, and I would advise that where this plaster has been removed that it should be replaced.” The work will be carried out in accordance with Mr. Pearson's suggestions.

### THE PRINCE OF WALES'S PAVILION AT THE HEALTH EXHIBITION.

THOSE who were fortunate enough to see the interior of the Prince's pavilion at the Fisheries Exhibition last year, and who have passed through the elegantly-furnished suite of rooms in the same building this year, will be in a position to contrast the different styles of decoration carried out on each occasion. It is not our intention to draw comparisons; it is sufficient for our purpose to give a brief description of the *ensemble* as it is now presented to us. Of the tens of thousands who have passed through these apartments since the opening of the exhibition we can scarcely suppose that a tithe of the number were able to appreciate the amount of labour bestowed upon the decorations, or the tone of artistic feeling that permeates the whole. The designs for the decorations and furnishing, as in the case of last year, were entrusted to Mr. Henry, of the Royal Windsor Tapestry Works, and it is only common courtesy to the talent of that gentleman to say that a master mind is apparent in the minutest detail; and to Messrs. Gillow, of Oxford Street, must be accorded an equal meed of praise for the manner in which the work has been carried out, and that few firms are probably capable of accomplishing in so satisfactory a manner. Entering through a pair of finely-executed wrought or hammered-iron gates, made by Barnards, Bishop & Barnards, of Norwich, and the same that did duty at the Prince's pavilion at the Paris Exhibition, 1878, we reach an octagonal entrance hall, in the Egyptian style, which has been popularly named the Arab room. The plays of the octagon disclose recesses containing luxuriously upholstered lounge seats, and the fireplace, while a circular recess and curtained divan is formed on the opposite side to the fireplace. Each of the openings is framed with the latticing of Meshrebuych woodwork, and a few Koran stands of the same material are placed about the room. A notable feature in this room is a four-fold screen of Turkish manufacture, made of a hard wood inlaid with pearl, the upper portion of the

panels having plate-glass panes. Turkish mirrors, also pearl inlaid brackets, &c., adorn the walls, and some well-executed hammered-iron jardinières find a place in the collection of ornaments. The fireplace is lined with blue and white Damascene tiles, a wrought-iron dog grate and fire-irons, evincing great taste in their design, completing this portion of the decoration. The general effect of this apartment may not commend itself to all English tastes, nevertheless there is much to admire in it. Most of the woodwork is painted in Indian red, and the dado, about 6 feet high, is of the same colour. A fretwork ornament, about 10 inches deep, surmounts this, and the walls are of a sage green, surmounted with a 12-inch frieze of gold leather paper. The ceiling is panelled by red wood mouldings, lined with gold, bordered with bands of blue in the panels. Tynecastle tapestry (so-called), though in reality this material is composed of a specially-made self-coloured canvas, which is decorated in any required style, forms the interior of the panels, and the material enters largely into the decoration of each of the rooms. Its effect is very attractive, and treated as it is here in a most artistic manner has much to recommend it. The electric light (Swan incandescent) is the mode of lighting carried out in each room, but this one is but sparsely provided with artificial light, which tones down the bright colouring to satisfactory proportions. To the left of this apartment is a small study, not generally shown to the mass of visitors. This is furnished in the Venetian style, the chairs (high-backed), cabinets, &c., being of ebony, inlaid with ivory in elaborate designs, the walls containing framed specimens of work carried out by Messrs. Gillow for notable people. The colouring of this unique room, dark olive-green woodwork, contrasts favourably with the furniture, and should not be missed by the interested visitor.

We next enter the dining-room, of noble proportions, in the style of early Louis XIV., which will no doubt commend itself to most English tastes, and is in direct contrast to the Egyptian room. White woodwork is employed here, the pilasters being painted in gold in shades of grey and blue. Tynecastle tapestry again enters largely into the decorative parts, and the ceiling, panelled and filled with painted ornament, is a study of itself. The floor is partly covered with a fine Axminster carpet of Persian design, the floor of this and the other rooms being of oak, with parquet borders. The chairs are covered with Windsor tapestry (*à la Gobelins*), the seat being of a conventional design, and the back comprising figures. Speaking of the Royal Windsor Tapestry Works, which are now engaging considerable attention, we understand as many as 15,000 shades of colour are at the command of the workers in this manufactory. There is a fine specimen of a marqueterie table in this room, the work of Messrs. Gillow. It is such an example as some of the old dealers would be glad to obtain, and is one that would enable them to make a large profit. This room is lighted by a ring of incandescent lamps, and four groups of three of the same order, and is most effective at night. Following on we reach the smoking-room, designed as a Greek temple, with alcoves and divans, and a central ottoman surmounted by a charming marble statuette of Eve, the lower portion of the work disclosing a serpent stealthily prying into a dove's nest. The statuette is voluptuously modelled, but is altogether a beautiful embodiment. This room is lighted by day by a well-arranged roof-light.

On the left of the smoking-room is a small retiring-room, the walls of which are covered with an Italian mezzara cloth, effective and very cheap, the chairs being of walnut wood and high backed.

We now pass outwards, and in doing so come upon a prettily-arranged conservatory with rockwork, plants, and water dripping from various parts. This has been arranged by Messrs. Dick Radclyffe & Co., of Holborn, a firm who are adepts in this kind of decoration. At night the electric light is brought into requisition, with charming effects, and the visitor lingers in this *salon* of flowers and artificial lighting loth to leave it.

### THE EDINBURGH THEATRE ROYAL.

PLANS and specifications have been prepared, and estimates received, for the reconstruction of the Theatre Royal, which was destroyed by fire on June 30 last. Mr. C. J. Phipps, who designed the former building, is the architect, and his plans show that the new theatre will be built very much on the same lines as its predecessor. Several new features are to be introduced, however, which are calculated to add to the safety and comfort of playgoers. First of all, increased facility is to be afforded on the higher levels of the building for entrance and egress by providing an additional staircase. The wall dividing the stage from the auditorium is to be of solid brickwork, and is to be carried up through the roof of the theatre; while all apartments of the nature of workshops and other necessary rooms are to be erected outside the main building. Last, but not least, the ventilating arrangements are to receive careful attention. As already indicated, offers have been given in for the reconstruction of the theatre, which Mr. Phipps has undertaken to have completed by the beginning of the pantomime season. As to cost, it is expected that this will be covered by the insurances on the old building, which amounted to 12,500*l*.



The Edinburgh Theatre Royal Company (Limited) have applied to the Dean of Guild Court for a warrant to remove and clear away the *debris* and other material from the building situated at the corner of Broughton Street and Little King Street, Edinburgh, and known as the Edinburgh Theatre Royal, and to reconstruct or reinstate the said building. The Court, accompanied by Mr. Cooper, the Burgh Engineer, Mr. Phipps, Mr. Heslop, and Mr. Officer, proceeded to inspect the ruins of the old building. The Lord Dean of Guild, after examining the walls, recommended certain things to be done in order to provide for their security. Part of the upper portions of the walls, it is stated, will have to be taken down and rebuilt, while the whole inside of the walls will have to be lined with concrete. The work of removing the rubbish and making the necessary preparations for the construction of the theatre will be commenced immediately.

## THE DESTRUCTION OF TIMBER AND STONE BY MARINE ANIMALS.

A LECTURE was delivered in Edinburgh on Tuesday on "The Boring of Marine Animals in Timber," &c., by Professor M'Intosh. The lecturer commenced by stating that the burrowing of marine forms was a feature familiar to every zoologist, for scarcely a dead shell could be dredged from the sea-bed that was not perforated by boring sponges. In the same way the surface of the limestone rocks of our southern shores was riddled by those sponges. So far as at present known, sponges bored only in calcareous substances, and there was a difference of opinion as to whether the agent in boring was the spicules or the soft annual jelly of the sponge. As regarded the boring of the purple sea urchins in gneiss and granite, the teeth were the main agency in the perforations. The group of annelids included many boring and burrowing forms, some perforating sand and others earth; while many bored in aluminous shale, sandstone, limestone, shells, and various substances. Each form, moreover, made a characteristic tunnel in the rock, so that the borer could in most cases be determined. None, however, bored wood, and though pieces of telegraph cable had been several times sent him, with accompanying annelids as the depredators, in no instance had the lecturer been able to connect them with the injury. There could be little doubt that those forms performed a useful function in the disintegration of dead shells, and in corroding the surface of calcareous and other rocks. The crustaceans and the molluscs were groups that were conspicuous in the perforation of wood and allied materials. Of crabs, the *Cheluria terebrans*, a form less familiar to Scottish zoologists than to their southern colleagues, was in xylophagous powers even more destructive than the common Scotch boring crab—the gribble—its excavation being considerably larger and more oblique. Though the gribble—*Limnoria lignorum*—must have been familiar to observers from a very early period, it was first described by Dr. Leach only in 1811, when Mr. Robert Stevenson, the celebrated engineer, found it burrowing most destructively in the large beams of Memel fir supporting the temporary beacon on the Bell Rock. Other logs of pine on the rock were reduced at the rate of about an inch a year, and the house timbers were so much destroyed by the gribble that many stood clear of the rock, supported only by the iron bolts and stanchions. It attacked all kinds of submarine woods; and the late Dr. Coldstream, Leith, had told them that in 1825 so extensive were the ravages of this creature that many of the piles of Trinity Chain Pier had to be replaced after four years' service, and studded all over with broad-headed nails from the base to the limit of high-water mark. Having described the structure of the gribble and its mode of boring, the lecturer said it had also acquired the habit of perforating the protecting envelopes and gutta-percha in which submarine telegraph cables were sheathed. The work of the burrowing crabs, however, was quite overshadowed by the far more serious encroachments which the boring shell-fishes were capable of making in timber and similar substances, as well as in rocks of various kinds. Professor M'Intosh pointed out the boring of the pholas and date shells in rocks, and went on to describe the destruction caused by xycophaga, which was to be seen in the deep water off the Firth of Forth and elsewhere in England and Scotland. It was, he said, a little bivalve shell-fish or mollusc, intermediate in structure between the stone-boring pholas and the strictly wood-boring teredo. There was very little externally in the wood attacked by this form to attract attention, except the presence on the surface of minute apertures, which indicated the points by which the young animals had entered; but on breaking open the wood the adults were found in smooth tunnels in every fragment large enough to afford a lodgment. The most conspicuous genus of wood-borer, however, was the teredo or shipworm, species of which occurred in every ocean. In the tube of the teredo the annelid (*Nereilepas*) was often found, and some observers maintained that it was the destroyer of the teredo, but the lecturer had some hesitation in subscribing to that theory. The very same species of annelid occurred abundantly along with the common hermit crab in the shells of the great whelk, and the association of annelids with other forms in tubes

or elsewhere was extremely common; but it was not for the purpose of preying on their neighbours, though the bodies of their hosts were in many cases softer than those of the teredo; they were what zoologists called messmates—dwelling in association with other animals. The object in life of all the species of teredo was to bore ceaselessly into timber, the tunnels in which varied from 1 to 2 feet in length in the case of the common teredo to fully a yard in the great teredo. Professor M'Intosh then gave a brief outline of the history of the teredo, which appeared to be mentioned for the first time in the "Knights of Aristophanes," and said that the French and Dutch suffered much more seriously from its ravages than we did. The theories that had been brought forward to explain the mode by which marine animals perforated material so different as wood, limestone, wax, granite, and aluminous shale, might be ranged round two great centres—the chemical and the mechanical. The advocates of the chemical theory seem to take it for granted that the borings occurred chiefly in calcareous substances, and with propriety, therefore, they made their solvent an acid. That notion, however, was unable to explain the perforations in media totally impervious to such action; while no trace of acid was found in many borers, and while present in some, it was likewise characteristic of other marine animals that did not bore. The mechanical theory, again, supposed that the animals perforated by means of shells or gritty particles in the case of molluscs, of teeth in sea-urchins, bristles in annelids, and horny processes in certain sea-acorns and gephyreans; but they were left in doubt concerning the extensive and wonderful excavations of the sponges, the bryozoa, and the rest of the cirripedes. Alluding to the methods of protecting submarine timber from the ravages of such animals as he had been speaking of, Professor M'Intosh said different kinds of wood were mentioned as being impenetrable by such boring action, but so far none had been successful. There were many preparations for the treatment of the wood before immersion. Soluble bitumen, silicated lime, and various compositions had each in turn been tried externally; while silicate of lime, creosote, and other fluids had been forced, under great pressure, into the tissue of the woods. The experiments of the Dutch Commissioners, who investigated the matter, had led them to the conclusion that no external protection other than metallic sheathing or the studding of the wood with broad-headed nails would be successful in resisting the attacks of these borers, while the only impregnation they found reliable was creosoting. In conclusion, Professor M'Intosh pointed out that while the Dutch, French, and other Commissions had done material service in regard to the best means of protecting timber from the attacks of borers, the subject was by no means exhausted. On the contrary, it would form a fitting object for research at the marine laboratories which at last, he was glad to say, were being established on our coasts. That ceaseless boring of wood was not, however, an unmitigated evil. The masses of timber swept seawards by many foreign rivers would prove a serious impediment to navigation if the marine borers did not slowly but surely accomplish their dissolution. In the same way the relics of many a ship in the depths of the sea were disposed of, and even utilised for the increase of animal life, which was, directly or indirectly, connected with the food of fishes, and, consequently, with the welfare of man.

## SANITARY INSPECTION IN GLASGOW.

AT the last meeting of the Glasgow Dean of Guild Court the Lord Dean of Guild inquired of Mr. Whyte, Assistant Master of Works, if a portion of the fees of the Court might not with advantage be applied as salary to an officer whose duties would be the inspection of the drains of houses as they were being built. Three hundred and fifty pounds had been received last year as fees of the Court, and his lordship thought it would be well to take that step in the direction of improving the sanitary conditions of the houses being put up. Mr. Whyte said the want of such an officer had been felt; but he feared very much that unless the Court had the power themselves to lay the drains there would be very little chance of the work ever being properly done. If it met with the approval of the gentlemen of the Court, the Lord Dean said he would bring the matter before the Board of Police to get the fees of this Court—which would otherwise go into what was called the Town Clerk's Fee Fund, a fund already running over—applied, and he thought beneficially applied, to maintaining an official to superintend the drainage arrangements of new buildings sanctioned by the Court. Then, in the event of the drains not being made properly, the Court could refuse to permit the occupation of the property until the drains were put right. It was suggested that one officer could not overtake all the work, and the Lord Dean mentioned that, although 224 plans of new buildings had been submitted to the Court during the past year, each of these had not separate drain plans, and he thought one man constantly employed could inspect all the tenements as they were in course of construction. The return he had received from Mr. Whyte indicated a comparatively small amount of buildings for occupation—last year he believed there was not one house built of



six apartments, and one-half of the houses that had been built had only two apartments. Nothing was so discreditable to the city as the state of the drains, and, speaking from personal experience of houses in Park Terrace, he said there was scarcely one of them that, on inspection, was not found in an imperfect and unhealthy state as regards the drainage arrangements. Mr. Howat gave it as his opinion that the inspection of drainage works would never be satisfactorily attended to until it was done by one of the city officials. Other members of the Court spoke in favour of something being done in the way indicated by the Lord Dean.

### CAST-IRON BRIDGES.

A REPORT by Colonel Yolland to the Board of Trade giving the result of his inquiry into the circumstances connected with the fall of four cast-iron girders of a bridge carrying the Camberwell Grove Road over the London, Chatham and Dover Railway at the Denmark Hill Station, says that, looking at the fact that six of these girders cracked in December last, and that four others of the same class and dimensions broke and fell on May 29 last, fortunately without producing any serious accidents, endangering the safety of the public travelling along the road or underneath it on the railway, he thought the prohibition which the Board of Trade had already issued against the use of cast-iron beam under-bridges on railways should now be extended to the use of the same material in the construction of beam bridges for carrying roads over railways, rather than to wait for some very serious accident occurring before issuing such prohibition. It is well known that cast iron cannot be relied on, and that beam bridges constructed of this material may give way at any moment without any previous indication or warning being given.

### WORKMEN'S DWELLINGS.

A COMPANY called the National Conservative Industrial Dwellings Association (Limited), with an authorised capital of 999,900*l.*, has just been incorporated for the purpose of constructing sanitary dwellings for artisans, labourers, and others, and of enabling working men to become the owners of their own houses, cottages, or agricultural allotments by a system of payments extending over a term of years. The association, which will own freehold property only, and be conducted on sound and strict business lines, will not confine its operations to crowded neighbourhoods. Besides erecting improved sanitary dwellings to populous districts, it will construct cottage residences at low rents in the suburbs, and as a special feature will, by making arrangements with the railway companies, comprise the cost of the tenants' season tickets in the rents. In country districts the association proposes to build cottages for agricultural labourers, and to acquire land for subdivision into allotments. In order to identify the association with the working classes and to give them a share in its control, a large amount of industrial stock will be issued exclusively to working men. It is claimed that the association will offer an absolutely safe security for the investment of small savings, and thus foster self-help among artisans and labourers, as much by improvement in their personal and domestic surroundings as by placing within their reach the means and the incentives for the cultivation of provident habits. It may be added that the association is promoted by gentlemen closely connected with the Conservative party as an earnest of the zeal and practical interest taken by them in the social well-being of the working classes.

### TOWNS IMPROVEMENT.

**Bradford.**—A recreation ground on Bradford Moor was opened on Saturday last. The recreation ground is 15 acres in extent, so that the corporation, after making this apportionment, had on hand over 30 acres of ground. Some of this has already been disposed of, and it is not improbable that in a few years most of the land will be utilised by house builders. The recreation ground, which is rectangular in form, is enclosed by a substantial boundary wall, 7 feet in height, except on that side nearest to Killinghall Road and the upper portion of the eastern side, which is furnished with wrought-iron railings 4 feet in height, fitted with ashlar coping. The tenders for laying out the grounds, &c., amounted to 4,692*l.* The plans were prepared by Mr. J. H. Cox, the borough surveyor, and the contracts for the various works have been held by the following firms:—Formation of the ground, drainage, and planting, Mr. Lister Kershaw, of Brighouse; masonry, Mr. J. Pratt; joinery, Messrs. J. Wilson & Sons; plastering, Mr. W. H. Hargreaves; plumbing, Mr. C. Howroyd; painting, Mr. W. Hird; slating, Messrs. Hill & Nelson; asphaltting, Mr. W. Bullough. The heating apparatus for the conservatories has been supplied by Mr. Walton, of Low Moor. The chief feature of the ground is a central stretch of green sward, 260 yards

long by 145 yards broad. At each side of this is a large alcove of Classic design, affording a good view over the whole of the ground. These buildings are of stone, lined inside with pressed bricks, covered in with blue Westmoreland slates, and surmounted by ornamental cresting, the fronts being of ornamental woodwork. The dimensions of each alcove are 37 feet by 16 feet. At the lower portion of the ground there is an extensive range of green-houses. In the centre is a conservatory, 21 feet square, having upon each side a greenhouse, 32 feet by 11 feet, with potting-houses, heating-chambers, tool shed, and gardener's store-room behind. The conservatory is octagonal in form, and is covered with plain sheet-glass, having one of Boyle's patent ventilators at the apex of the roof.

### SCHOOL BUILDINGS.

**Horwich.**—The corner-stones of a new Independent Methodist Sunday school—which is being erected immediately behind the chapel—have been laid. The new school is designed to accommodate 400 scholars. The building will be of local pitch faced stone, and the woodwork will be of pitch-pine, varnished throughout. The roof will be open timbered, and the ventilation will be secured on Boyle's principle. The heating will be by hot-water piping, by Messrs. Crumblehulme, of Derby Street, Bolton. Mr. Wilkinson Brierley, of Higson Street, Bolton, does the joiner's work, and Mr. Thomas Harrison and Mr. Wilkinson, both of Horwich, do respectively the stone work, plastering, painting, plumbing, and glazing. Mr. T. E. Smith, of Wood Street, Bolton, is the architect.

**Kettering.**—St. Andrew's new schools have been opened for use. They are situate near the church, and are built of Glendon brown stone with Box ground-stone dressings. The roofs are slated. Internally the walls are lined with white brick. The roofs are open and stained and varnished. The main room is 60 feet by 20 feet, with wings at one end and large classroom at other. The playgrounds are asphalted. There is a bell turret outside, and the whole forms a good group and an improvement to the neighbourhood, where the schools are much wanted. The cost, exclusive of land, has been about 1,300*l.* The works have been carried out under the superintendence of Mr. R. W. Johnson, architect, of Kettering and Melton, by Mr. George Henson, builder, of Kettering.

**Stanningley.**—The memorial-stones of a new Sunday-school, to be erected in connection with the Eleven Lane Ends Primitive Methodist Chapel, have just been laid. The school is being built of brick, with stone dressings, from designs prepared by Mr. C. S. Nelson, of Leeds, and is estimated to cost 750*l.*

**Stockton.**—New Catholic schools have been opened in Disraeli Street, Stockton. The schools have been erected from the designs of Mr. E. E. Clapham, architect, of Stockton. Accommodation has been provided for 500 children. The cost of the buildings has been about 3,000*l.*

### CHURCH BUILDING AND RESTORATION.

**Grays.**—The foundation-stones of the Wesleyan chapel, in course of construction at Grays, have been laid. The chapel, which will cost about 3,000*l.*, is being built on a site in the London Road, by Mr. William Wood, of Chelmsford, from the designs of Mr. C. Bell, of Dashwood House, Broad Street, E.C. It will be constructed of stock bricks, with stone dressings.

**Haslingden.**—The foundation-stone of the church of St. John, Stonefold, Haslingden, has been laid. The church will consist of nave, aisle, chancel, vestry, and organ-chamber, with porch and bell-turret. It is to be built of Yorkshire stone with oak fittings throughout. The plans have been prepared by Mr. Basil Champneys, architect, London.

**Hereford.**—The corner-stone of the new nave and south aisle of St. Peter's Church has been laid. The church of St. Peter's dates from the year 1060. With the exception of the chancel and the tower, which were only restored a few years ago, the entire structure, which had become greatly decayed, has been demolished, and a new nave, with south aisle, is in course of erection from designs by Mr. Nicholson, diocesan architect. The estimated cost of the restoration is 3,400*l.*

**Heybridge, Essex.**—Heybridge Church is being restored. The walls are in a bad condition outside, and a large outlay will be entailed in their repair. The tower, a very low one, is also in need of restoration. Several of the windows in the nave and chancel of the church have from time to time been blocked up, and it is proposed to renew these, while the east window will be restored. The work is being carried out by Mr. Gozzett, builder, of Woodham Walter, under the direction of Mr. E. Christian, architect.

**London.**—During the past few weeks considerable improvements have been made in the interior of the parish church of St.



Sepulchre, Holborn Viaduct. Two Gothic lobbies have been added, one upon the north and another on the south entrance doorway from the porch. They have been designed so as to accord strictly with the ancient architecture of the tower and vestibule, as rebuilt in 1450 by Sir John Popham. They are constructed entirely of oak panelling, the upper portions being formed of richly-carved open tracery, filled with plate glass, and large and elaborately carved cornices. The doors are made to swing both ways. The tracery-work is fifteenth-century Gothic. They have been erected by Mr. John Emery, of the Gray's Inn Joinery Works, 15 Theobald's Road, W.C. The architect is Mr. Arthur Billing, F.R.I.B.A., of Bank Chambers, Tooley Street, S.E.

**Morecambe Bay.**—The foundation-stone of a new church for the village of Silverdale, at the head of Morecambe Bay, has been laid. Plans have been prepared by Mr. W. Ball, of Manchester, and the contract for the erection of the new church let to Mr. James Hatch, of Lancaster, the amount being about 4,600*l*. Accommodation will be provided for 336 worshippers.

**Netherton.**—The foundation-stone of the church of All Souls, Netherton, near Maryport, has been laid. Mr. C. J. Ferguson, F.S.A., of Carlisle, is the architect. The style of the church is Gothic, and will consist of north and south transepts and nave, with a vestry and organ-chamber. Its length inside will be 150 feet, and breadth 64 feet, and the edifice will accommodate 700 people. It will be built of red sandstone from the Netherhall quarries. The estimated cost is from 5,000*l*. to 6,000*l*.

**Old Shoreham, Sussex.**—It is contemplated to make certain alterations and improvements to the nave, &c., of the ancient parish church, situate by the banks of the river Adur, and plans and estimates for the same have been furnished by Mr. Arthur Loader, architect, of Brighton.

**Richmond, Yorks.**—A Congregational church was opened on Wednesday at Richmond. The buildings comprise church and chancel, recess for organ, with present accommodation for 250 persons, deacons' and ministers' vestries, school for 150 children, lobbies, and the usual outbuildings. Provision is made for an end gallery, which will give a further accommodation in the church of 80 sittings. Externally the building is of local lines in regular courses, freestone dressing being largely introduced. The roofs are covered with Westmoreland green slates. At the south-west angle there is an octagonal tower with long traceried belfry windows, moulded and embattled coping. The style is Perpendicular, harmonising with many old buildings in the town. The architects are Messrs. Clark & Moscrop, of Feethams, Darlington.

**Southwram.**—A new organ-chamber is being added to St. Anne's Church, and other alterations are shortly to be proceeded with. A semi-octagonal baptistery will be built on the north side, lighted with three lancet-headed windows. The alterations are carried out under the direction of Mr. W. S. Barber, architect.

**Whitwood Mere.**—The foundation-stones of the Potteries Mission Church, Whitwood Mere, Castleford, have been laid. The church will consist of nave, chancel, vestry (with heating chamber under), and porch, and is to be constructed of brick, with pressed facings and stone dressings externally and internally, with open-timbered roof of pitch pine, having hammer-beam principals, moulded purlins, and battlemented cornice, and will be covered with boards, roof felting, and Welsh slating. A *flèche* on roof will serve the double purpose of bell turret and foul air extractor. The chancel arch will be formed in three orders, of brick, with moulded stopped angles. The windows will be glazed with cathedral glass in leaded lights. The heating will be performed by means of hot water. The church will seat 250 persons. The architects are Messrs. Perkin & Bulmer, of Leeds.

## NEW BUILDINGS.

**Artisans' Dwellings, Bloomsbury.**—A great improvement has just been completed on the estate of the Duke of Bedford by pulling down the houses on each side of the narrow passage known as Woburn Court, which leads from Duke Street to Streatham Street, and making a new street in continuation of Streatham Street up to Duke Street, in a parallel line with Oxford Street. On the north side of the new street a range of artisans' dwellings have been erected, containing twenty tenements, each having a living-room, two bedrooms, scullery, and water-closet, very well lighted and ventilated, with a large washhouse and laundry on the basement, fitted up with every convenience. The houses, which are of a more than usual ornate character for this class of building, were designed by Mr. Henry M. Eyton, architect, of Ipswich, and carried out by Mr. Oliver T. Gibbons, contractor, of Dashwood House, Old Broad Street, at a cost of a little over 5,000*l*.

**Bradford.**—The memorial-stone of the building to be erected in extension of the Bradford Infirmary will be laid on the 30th inst. The extension is to consist of a detached wing between the eastern end of the present building and Lumb Lane. The southern end of this wing will be in line with the general front of the present infirmary, and its northern at six yards from the boundary

of the estate there. The distance between the old and new buildings at the narrowest point will be about 40 feet, the two being connected only on the basement and ground-floors by corridors or open arcades. The main block of the new building will measure externally 126 feet 6 inches by 35 feet, the height being the same as that of the present building. The rooms on the basement will be light and airy, and suitable for use as day-rooms, being surrounded by a wide and open area. The ground-floor will comprise a day-room and bedroom each for two head nurses, and five small wards for cases which may require separate treatment. The first floor will form one large ward for twenty-six beds, the cubic space allotted to each being nearly twice as much as in the present building; and the second, or uppermost floor, will be reserved entirely for children, and it is estimated that thus accommodation for thirty-four children will be provided. The total number of beds will be from seventy to eighty, in addition to those in the present building. Architecturally the building will correspond with the present one, but the window area in all the wards will be much larger. Each ward will be warmed by open fires, with hot-water pipes added when the weather is very cold. The floors and the roof will be of concrete, the former, of course, having an upper flooring of boards. In another part of the grounds there will be provided isolated wards for the treatment of any infectious cases that may arise. Messrs. Milnes & France are the architects.

## WORKS IN PROGRESS.

**The Imperial Stone Company** has been entrusted with the completion of the paving of Marlborough House stables for H.R.H. the Prince of Wales, with their noted "Petrosilicon," which is fast becoming the favourite flooring for farm buildings, stables, kennels, tennis-courts, &c.

**Ventilation of Public Buildings.**—Messrs. Robert Boyle & Son, 64 Holborn Viaduct, and Glasgow, have just applied their patent self-acting air-pump ventilators and system of ventilation to the Inland Revenue Department, Somerset House; Gresham Hall, Brixton; University College, Bangor, North Wales; Council Room, Barnsley; Masonic Club, Landport; Alexandra Club-house, Southend; Free Library, Northwich; new Offices, Edmonton Local Board of Health; York Institute, York; Carr & Company's new stables, Carlisle; new factory for the Ekman Pulp and Paper Company, Northfleet; Lillehurst, Simonstown Hawes, Shrubland Park, and Muncaster Castle, residences of the Duke of Sutherland, Lord Wharneckcliffe, Sir G. Brooke Middleton, Bart., and Lord Muncaster.

## GENERAL.

**The Wolverhampton Exhibition** is to be kept open until the end of October. About 200,000 persons have paid for admission since the opening, and 2,000 season tickets have been purchased.

**A Bronze Statue of Sir Bartle Frere**, which is to be erected in the Thames Embankment Gardens, at a cost of 2,700*l*., has been entrusted to Mr. Brock, A.R.A., for execution. It will be 11 feet high, and will stand on a granite pedestal near the statues of Tyndale and Sir James Outram. The work is already commenced.

**Mr. W. Pettit Griffiths, F.S.A.**, died at his house in London on Sunday last. In addition to his practice as an architect, Mr. Griffith was the author of a great many papers, and of a work on the relation of geometry to design.

**The Committee of the Oldham Free Library and Art Museum** have decided to proceed with the furnishing of the permanent structure, and have instructed Mr. L. Booth, of Manchester, to prepare all the necessary designs for the work required to be done.

**Mr. Joseph Crossland**, borough magistrate and chairman of the Huddersfield Banking Company, has offered a donation of 5,000*l*. towards the cost of building a free library for Huddersfield, if the remainder of the funds requisite are raised by subscription.

**Mr. T. A. Hearson, R.N.**, of the Royal Naval College, Greenwich, has been appointed Professor of Engineering at the Royal Indian Civil Engineering College, Cooper's Hill, in succession to Professor Unwin; lately appointed to the City and Guilds Technical Institute, South Kensington.

**Galvanised Iron** is largely used in New South Wales for fencing, roofing, and similar purposes. During the last three years 46,114 tons have been imported.

**A Large Casting** has just been successfully completed at the Royal Gun Factories, Royal Arsenal, Woolwich. The casting was of steel, and was for the manufacture of an hydraulic jack. The metal was fused in two crucibles; one contained 16 tons and the other 6 tons, together 22 tons.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, SEPTEMBER 20, 1884.

### EDITORIAL NOTICES.

The authors of signed articles and papers read in public must necessarily be held responsible for their contents.

No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.

Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.

### TENDERS, ETC.

As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—“Contract Supplement to THE ARCHITECT.”

### ADVERTISEMENT SCALE.

For Two Lines and under	£0 2 6
For every Additional Line	0 0 6
For Quarter Page	2 10 0
For Half Page	4 10 0
For a Page	8 8 0

On pages preceding and following matter, special rates.

Public Companies' Advertisements, 12l. 12s. per page; 1s. per line.

### COMPETITIONS OPEN.

BIDEFORD.—Sept. 22.—The Trustees of the Bideford Bridge Trust invite Competitive Designs for the Erection of a Block of Buildings suitable for a Post Office on site of Premises in High Street. Premiums of 20l. and 10l. The cost of carrying out any of the Designs not to exceed 800l.

BOMBAY.—Nov. 6.—The Municipal Commissioner of Bombay invites Designs and Estimates for a New Municipal Hall and Offices, which must be sent to his Office by Twelve noon, on Nov. 6. A Premium of 5,000 rs. will be given for the Design most approved of by the Commissioner, with the assistance of a Committee of the Corporation; 3,000 rs. for the second, and 2,000 rs. for the third. The total cost of the buildings is not to exceed 5 lacs (5,00,000 rs.). Mr. E. C. K. Ollivant, Municipal Commissioner's Office, Bombay, or at Messrs. E. W. & R. Oliver, 1 Corbet Court, Gracechurch Street, London.

EGHAM.—Oct. 11.—Designs are invited for the Erection of a School to accommodate 320 Children. Mr. Benjamin Tice, Clerk to the School Board, Irene Villa, Egham.

STOCKPORT.—Oct. 1.—Designs are invited for Public Baths. Premiums of £50, £30, and Mr. Walter Hyde, Town Clerk Stockport.

### CONTRACTS OPEN.

ABERGAVENNY.—Sept. 23.—For Building Vagrant Cells and Wards at Workhouse. Mr. W. H. P. Scanlon, Clerk to the Guardians, Abergavenny.

AIRDRIE.—Sept. 22.—For Erection of Railway Station Buildings. Mr. John Strain, C.E., 164 West George Street, Glasgow.

BLYTH.—Sept. 27.—For Restoration of Church. Mr. C. Hodgson Fowler, Architect, The College, Durham.

BURNLEY.—Sept. 24.—For Supplying and Fixing Wrought Ironwork (75 tons) in Girder Bridge over Canal. Mr. J. E. Stafford, Borough Engineer, Burnley.

CLEGGAN.—Sept. 24.—For Construction of Basin, Wharves, Groin, Extension of Pier, Deepening Harbour, &c. Mr. W. B. Soady, Secretary, Office of Public Works, Dublin.

COCKERMOUTH.—Sept. 27.—For Taking Down and Re-erecting Buildings at Globe Hotel. Mr. R. S. Marsh, Surveyor, Cockermouth.

CUSHENDALL.—Oct. 1.—For Reseating and Enlarging Parish Church. Rev. W. Thompson, Layde Rectory, Cushendall, co. Down.

DARLINGTON.—Sept. 29.—For Building Board Schools in Beaumont Street. Mr. F. W. Brooks, Architect, 40 High Row, Darlington.

FENTON.—Sept. 20.—For Building Twelve Houses and Shop. Messrs. R. Scrivener & Sons, Architects, Howard Place, Hanley.

FLINT.—Sept. 22.—For Additions to Town Hall. Mr. Thomas M. Lockwood, Architect, 80 Foregate Street, Chester.

FULHAM.—Sept. 26.—For Building Medical Superintendent's House, Lodge, Stores, Reception-rooms, and Discharge-rooms, Western Hospital. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

HAMMERSMITH.—Oct. 2.—For Rebuilding Superstructure and Strengthening Hammermith Bridge, Construction of Temporary Bridge, &c. Sir J. W. Bazilgette, Spring Gardens, S.W.

KIRKHAM.—Sept. 22.—For Construction of Bridge over Railway. The Engineer, Hunt's Bank, Manchester.

KIRKSTALL.—Sept. 20.—For Stone Boundary Wall, Entrance Gateways, Piers, and Iron Gates to Burial Ground. Mr. T. Winn, Architect, 18 Park Lane, Leeds.

LEE.—Sept. 25.—For Construction of Brick Sewer (4,200 feet), Grove Park. Metropolitan Board of Works, Spring Gardens, S.W.

LIMERICK.—Sept. 22.—For Building the St. Vincent of Paul National School. Messrs. Nash & Son, Land Agents, 85 George Street, Limerick.

LIVERPOOL.—Sept. 22.—For Pulling Down and Rebuilding Stables for the Corporation. The City Engineer's Office, Liverpool, W.

MANCHESTER.—Sept. 22.—For Building Carriage Shed, at Red Bank, and Goods Shed, Salford. The Engineer, Hunt's Bank, Manchester.

MARYPORT.—Oct. 3.—For Building Battery, Drill Shed and Offices. Director of Works Department, Admiralty, 71 Spring Gardens, S.W.

NEWCASTLE-ON-TYNE.—Sept. 30.—For Clearing Site and Building Offices for the Tyne Improvement Commissioners. Mr. J. J. Stevenson, 18 Queen's Road, Bayswater, W.

ORMSKIRK.—Oct. 1.—For Building Workhouse School and Premises. Mr. Thomas Kissack, Architect, Albany Buildings, Church Street, Ormskirk.

PERTH.—Sept. 26.—For Enlargement of the General Station. Messrs. Blyth & Cunningham, C.E., 135 George Street, Edinburgh.

RUNCORN.—Sept. 23.—For Additions to Hospital Premises. The Surveyor, Town Hall, Waterloo Road, Runcorn.

SALISBURY.—Sept. 27.—For Rebuilding Cottage at Waterworks. Mr. W. C. Powning, Town Clerk, Salisbury.

SHEFFIELD.—Sept. 23.—For Building Retort House. Mr. J. T. Key, Engineer, Gas Offices, Commercial Street, Sheffield.

STRATFORD.—Sept. 23.—For Building Police Court and Offices. Mr. Lewis Angell, C.E., Town Hall, Stratford, E.

STROUD.—Sept. 20.—For Building Post-Office. H.M. Office of Works, 12 Whitehall Place, S.W.

SUTTON.—Sept. 23.—For Building House for Medical Officer. Mr. H. Burgess, Vestry Hall, Walworth, S.E.

TODMORDEN.—Sept. 26.—For Construction of Reservoir, Ramsden Clough. Mr. James Farrar, C.E., Market Street, Bury.

UPAVON.—Sept. 29.—For Building Farmhouse and Stables. Messrs. John Harding & Son, Architects, 51 Canal, Salisbury.

WEMBLEY.—Sept. 25.—For Erection of Brick Boundary Walls, Iron Entrance Gates, Piers, &c., for the Burial Board. Mr. E. Clarke, Architect, 6 Adam Street, Adelphi.

WEST HARTLEPOOL.—Sept. 22.—For Building Shop and Premises. Mr. W. Young, Architect, Druids' Hall, West Hartlepool.

WIDNES.—Sept. 29.—For Erection of Public Offices and other Buildings. Messrs. F. & G. Holme, Architects, Dale Street, Liverpool.

WINCHMORE HILL.—Sept. 26.—For Building Hospital, Chaseville Park. Messrs. Pennington & Bridgen, Architects, 8 John Street, Adelphi.

### TENDERS.

#### BARTON TURF.

For New Vicarage, Barton Turf. Mr. ARTHUR J. LACEY, Architect, Norwich.	
Brewster, Norwich	£1,750 4 0
Wilkin, Norwich	1,733 19 0
Downing & Son, Norwich	1,724 0 0
Wegg, Norwich	1,718 4 6
Hawes, Norwich	1,625 10 0
Hurn, Norwich	1,603 9 0
Watts, Cawston	1,571 3 6
BATCHELOR, Stalham (accepted)	1,495 16 0

#### BLACKBURN.

For Building St. Barnabas' Church, Addison Street, Blackburn. Mr. WILLIAM S. VARLEY, F.R.I.B.A., Architect, Blackburn. Quantities by the Architect.	
Ibbotson	£6,600 0 0
Fawcett	6,269 0 0
Fecitt	6,246 0 0
Cronshaw	6,110 0 0
Abbott & Son	6,100 0 0
MARSHALL & DENT (accepted)	6,098 0 0
W. & T. Arkwright	6,075 10 0
Whittaker	6,040 0 0
Kenyon & Moulding	6,037 0 0
Higson & Son	5,997 0 0
All of Blackburn.	

#### BRADFORD.

For Widening Allerton Road, Bradford. CLOUGH & SON (accepted)	£2,016 5 3
For Additions and Alterations to Warehouse in Chapel Street, for Mr. Samuel Smith. Mr. W. LONGLEY, 5 Charles Street, Bradford, Architect.	
Accepted Tenders.	
Hindle & Son, Manningham, mason	£419 5 0
Stephenson & Co., Great Horton, joiner	475 12 0
Haigh & Slater, Lester Hills, plumber and glazier	98 15 0
Bartle, Manningham, plasterer	60 0 0
Hill & Nelson, Bradford, slater	17 10 0
Total	£1,071 2 0

#### BRIGHOUSE.

For Erection of Warehouse in Well Holme Estate, Brighouse. Messrs. GEO. HEPWORTH & SON, Architects, Brighouse.	
J. Bottomley, Brighouse, mason.	
T. Bottomley, Rastrick, carpenter and joiner.	
Smithies, Brighouse, slater.	
Brooke, Brighouse, plumber and glazier.	
Gledhill & Barraclough, Brighouse, plasterer.	
Naylor, Brighouse, painter.	
Stead & Sons, Cleckheaton, ironwork.	



**BROMLEY.**

For Building Additional Stables at Bromley-by-Bow, for the London General Omnibus Company, Limited. Quantities by Mr. Bolton.

Gibbons	£1,050	0	0
Deacon	985	0	0
Houghton	982	0	0
Dickeson	959	0	0
Robson	947	0	0
Haynes	920	0	0
Manning	895	0	0
Beale	875	0	0
Thomson & Son	860	0	0
Bolding	847	0	0
Richens & Mount	836	0	0
Garrud	831	0	0
Parker	829	0	0
Hunt	763	0	0
Aldridge & Jenvey	757	10	0
SCHARIEN & WILLIAMS (accepted)	729	0	0

**CARDIFF.**

For Erection of Nos 55 and 56 St. Mary Street, and Warehouse in Mill Lane, Cardiff. Mr. J. P. JONES, Architect, 27 Park Street, Cardiff.

MARTIN (accepted).

For Additions to Beaufort House, Roath Road, Cardiff, for Dr. J. L. Treharne. Mr. J. P. JONES, Architect, 27 Park Street, Cardiff.

JONES BROS. (accepted).

For Painting Ironwork of Cardiff Bridge over the River Taff, Cowbridge Road. Mr. Wm. HARPER, Borough Engineer, Cardiff.

Davis & Son	£109	0	0
Jenks	107	0	0
LEWIS (accepted)	74	0	0

For Construction of Storage Reservoir at Llanishen, for the Cardiff Corporation. Mr. L. WHEATLEY, Borough Engineer.

Gibb	£27,070	0	0
Meakin & Dean	65,713	2	3
Geen & Parker	62,960	0	3
Billups	58,611	3	2
Snowdon	57,716	0	0
Jones	57,114	0	0
Nelson & Co.	55,118	0	0
MacKay	55,051	18	5
WALKER (accepted)	54,543	19	4
Lawton	54,000	0	0
Dickson	51,746	5	0
Evans Bros.	51,500	0	0
Krauss	49,860	0	0
Jevons	47,839	0	11

**CARMARTHEN.**

For Building Schoolroom adjoining the Baptist Chapel, Priory Street, Carmarthen. Mr. G. MORGAN, Architect, 24 King Street, Carmarthen.

Evans	£1,235	0	0
J. Griffiths	1,110	0	0
W. Griffiths	1,102	8	0
J. & D. Jones	1,091	11	0
D. Griffiths	1,087	0	0
MORRIS (accepted)	1,043	13	0

**CHELSEFIELD.**

For Ventilating Works and Repairs to the Schools, Chelsfield, Kent. Mr. ST. PIERRE HARRIS, Architect, CROSSLEY, Bromley (accepted).\*

\* No competition.

**CHEPSTOW.**

For Building Petty Sessional Court, Chipstow. Mr. WILLIAM TANNER, County Surveyor, Architect. Quantities by the Surveyor.

Prosser, Newport	£745	0	0
Davies, Cardiff	730	0	0
King, Gloucester	715	0	0
Charles, Monmouth	715	0	0
Thomas, Abergavenny	675	0	0
Brind, Newport	627	0	0
Jones & Son, Newport	619	0	0
Phillips, Chipstow	606	0	0
Architect's estimate	606	0	0

**CHISLEHURST.**

For Repairs and Alterations to Incheape, Chislehurst, for Mr. L. Fry. Mr. ST. PIERRE HARRIS, Architect.

Horrocks, Croydon	£134	0	0
Wood, Chislehurst (accepted)*	109	0	0

\* Not including casements.

**EGREMONT.**

For Alterations and Additions to Seven Houses at Egremont, Cumberland. Mr. J. S. MOFFATT, Architect, Whitehaven.

Moffatt, Egremont	£748	15	0
Pearson, Cleator Moor	690	0	0
E. & D. Pearson, Cleator Moor	688	0	0
Twiname, Lamplough	669	0	0
CHAPPEL, Carnforth (accepted)	645	0	0

**ENFIELD.**

For Erection of Mission Church, New Lane, Enfield. Mr. W. D. CHURCH, Architect.

Mills	£1,477	0	0
Boyce	1,450	0	0
Staines & Son	1,399	0	0
Shurmur	1,386	0	0
Cook	1,295	0	0
Fairhead	1,285	0	0
Palman & Fotheringham	1,268	0	0
Tinson	1,184	0	0

**HANLEY.**

For Alterations to Police Cells, Hanley. CORNES (accepted).

SCARRATT, painting (accepted)	£126	10	0
	147	10	0

**GALSTON.**

For Drainage of Part of the Burgh, Galston.

Law & Co., Duntocher	£1,047	1	11
Boyd & Forest, Kilmarnock	848	0	0
Moffat, Paisley	810	0	0
Steel, Galston	786	0	0
Reid, Kilmarnock	778	6	8
J. & W. Osborne, Ayr	752	0	9
J. & D. Griffin, Glasgow	720	6	7

**GREAT WITCHINGHAM.**

For Building Small Farmhouse at Brisley, for the Trustees of Tuddenham Friendly Society. Mr. JOHN DUNT, Surveyor. Quantities by Mr. H. W. Nankivell.

Whiting & Hammond, East Dereham	£285	0	0
Brown, Great Witchingham	275	18	7
Mays, East Dereham	265	19	0
Tathills, Fakenham	270	0	0
WOODHOUSE, Foulsham ((accepted)	229	19	0
Middleton & Son, Mattishall	229	10	0

**HOUGHTON-LE-SPRING.**

For Erection of Additional Room to Laundry at Workhouse, Houghton-le-Spring Union.

P. & J. Balmer, Houghton-le-Spring	£74	17	0
Forster, Spennymoor	70	0	0
Grainger, Fence Houses	69	15	0
HARRISON, Houghton-le-Spring (accepted)	69	0	0

**HULL.**

For Building Board School, Clapham Street, Hull.

HARPER (accepted)	£6,487	12	0
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**KEIGHLEY.**

For Pulling Down Buildings in Longcroft, and Rebuilding to Improved Line. Mr. W. H. HOPKINSON, Borough Engineer.

RHODES BROS., Shipley (accepted)	£59	14	0
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**KING'S NORTON.**

For Making, &c., and Draining Heeley Road, Selly Oak, King's Norton. Mr. R. GODFREY, Surveyor, King's Heath.

Pearson & Colightly, Birmingham	£2,181	14	4
Biggs, Handsworth	1,950	0	0
Law, Kidderminster	1,840	0	0
Jones & Fitzmaurice, Birmingham	1,759	0	0
CURRALL & LEWIS, Birmingham (accepted)	1,542	0	0

**LEICESTER.**

For New Premises on South Side of Market Place, Leicester, for the Corporation. Messrs. WHEELER, HOLLANDS & JAMES, Architects, 119 Cheapside, E.C. Quantities by Messrs. Evans & Deacon.

Barnett	£3,310	0	0
Jewsbey	3,241	0	0
Bass	3,175	0	0
Kellett & Sons	3,169	0	0
Bland	3,150	0	0
Tyers	3,100	0	0
Plant	3,086	0	0
Wright	3,059	0	0
Major	3,049	0	0
W. & H. Herbert	3,028	0	0
DUXBET & SONS (accepted)	3,000	0	0

**LIVERPOOL.**

For Flagging and Completing of Bishopsgate Street, Wavertree.

Anwell, Liverpool	£1,415	4	4
Smith, Manchester	1,332	4	10
Chadwick, Liverpool	1,221	0	0
Thomas, Liverpool	1,130	0	0
Ireland & Hurley, Liverpool	1,091	3	1
Catterall & Co., Liverpool	1,056	0	0
Bullock, West Derby	1,040	14	0
MARR, Liverpool (accepted)	970	0	0

**LONDON.**

For Alterations, &c., to the Pegasus Public-house, Green Lanes, N. Mr. W. WEST, Architect.

Godden	£2,095	0	0
Spencer & Co.	1,850	0	0
Roach	1,750	0	0
Mills	1,626	0	0
Shurmur	1,566	0	0
Jackson & Todd	1,325	0	0

For Alterations to the Friend-at-Hand, Russell Square, W. Messrs. BIRD & WALTERS, Architects.

Auley	£990	0	0
Shurmur	989	0	0
Jackson & Todd	949	0	0
Steel Bros.	949	0	0
Birch & Co.	895	0	0
Yeo	865	0	0
Ridout	837	0	0

For Alterations at the Desborough Arms, Harrow Road. Messrs. BIRD & WALTERS, Architects.

Mark	£1,078	0	0
Marr	1,065	0	0
Jackson & Todd	1,049	0	0
Shurmur	990	0	0
Steel Bros.	978	0	0
Birch & Co.	977	0	0
Goad	975	0	0

For Alterations, &c., at the Brunswick Arms, Old Kent Road. Messrs. BIRD & WALTERS, Architects.

Gold	£1,859	0	0
Birch & Co.	1,817	0	0
Williams & Son	1,790	0	0
Auley	1,730	0	0
Shurmur	1,694	0	0
Stillings	1,399	9	0

**LUDLOW.**

For Providing Iron Girders under Market Hall, Ludlow.

Griffiths	£435	10	0
McBean	25	17	6
Harding	22	0	0

**MALVERN.**

For Works on Malvern Common.

Broad, Malvern	£355	0	0
Setton, Malvern Link	315	0	0
OSBORNE, Malvern (accepted)	326	0	0

**MATLOCK.**

For House at Matlock, for Dr. Marshall. Mr. G. E. STATHAM, Architect, Nottingham and Matlock Bridge. Quantities by the Architect.

Beck	£898	0	0
Wildgoose	832	0	0
Statham	829	0	0
Bridge	810	0	0
ASKEW (accepted)	800	0	0

**MATLOCK BRIDGE.**

For Pulling Down and Rebuilding Second Quarter Central Block, Smedley's Hydropathic Establishment, Matlock Bridge. Mr. G. E. STATHAM, Architect, Wheelergate, Nottingham, and Matlock Bridge. Quantities by the Architect.

Mason, Slater, and Plasterer's work.

Gladwin, Buxton	£3,200	0	0
Baines, Newark	2,770	0	0
Wigley, Burton-on-Trent	2,320	0	0
Wildgoose, Matlock	2,309	0	0
Beck, Matlock	2,266	0	0
ASKEW, Matlock (accepted)	2,247	12	0
Bridge, Matlock	2,165	0	0

Joiner and Plumber's Work.

Scattergood & Warrington, New Mills	2,509	19	0
Knowles, Matlock	2,309	0	0
Larmuth & Sidebotham, Manchester	2,227	10	7
Beck, Matlock	2,128	0	0
STATHAM, Matlock (accepted)	2,025	0	0
Wigley, Burton-on-Trent	1,980	0	0
Knight, Lincoln	1,960	0	0

**NETLEY.**

For Building Infants' School at Netley, for the Hound School Board. Mr. JUD, Architect, Southampton.

Light, Portsmouth	£374	0	0
Rowland, Southampton	862	10	0
Chapman, Woolston	855	10	0
Bennett, Woolston	787	0	0
HINTON, Woolston (accepted)	783	10	0
Rowland & Harvey, Southampton	750	0	0
Goodeve, Woolston	750	0	0
Architect's Estimate	880	0	0

**NORWICH.**

For the Restoration of St. Philip's Rooms, Norwich. Mr. ARTHUR J. LACEY, Architect, Norwich.

Read	£450	0	0
Bennett	425	10	0
Brewster	397	0	0
Hurn	389	0	0
Bells	377	0	0
WILKINS (accepted)	335	0	0
Wilkin	333	0	0

For Building Shop and House for Mr. E. B. Brock, Outfitter, Mr. ARTHUR J. LACEY, Architect and Surveyor, Oxford Hill, Norwich.

Dawes	£469	9	0
Bennett	450	0	0
Wilkin	450	0	0
Hurn	410	0	0
Tillett	399	0	0
Brewster	397	15	0
Sendall	364	7	0
BATLEY (accepted)	345	0	0

**NOTTINGHAM.**

For Sewering Various Streets, Nottingham. Mr. BROWN, Borough Surveyor.

Hopkins, Nottingham	£516	17	1
Smart, Nottingham	509	18	0
Cordon, Nottingham	474	15	0
Knight, Loughborough	420	5	0
Shortland & Co., Carrington	350	6	9
CORDON, Jun., Nottingham (accepted)	350	0	0

**PETERSFIELD.**

For Drainage and other Works, Petersfield. Mr. W. BARNES KINSEY, C.E., Westminster.

Hall, Portsmouth	£8,757	6	6
Bottoms Bros., Batterssea	7,976	0	0
Crook, Northam	7,480	0	0
Poole, Gravesend	7,385	4	0
M. Kay, Southsea	7,118	17	3
Crook & Smith, Southampton	6,993	0	0
Hayter, Landport	6,740	0	0
Cook & Co., Batterssea	6,718	0	0
Adams	6,437	0	5
DEARLE, Eastbourne (accepted)	5,880	0	0

**ORPINGTON.**

For Additions to Stables, &c., at Fern Lodge, Orpington, with Extra Works to the House. Mr. ST. PIERRE HARRIS, Architect.

W. & F. CROAKER (accepted)	£339	0	0
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No competition.

**ST. MARY CRAY.**

For Additions, Alterations, and Repairs to Kevington, St. Mary Cray, for Mr. R. B. Erens. Mr. ST. PIERRE HARRIS, Architect. Mr. Wm. Hodsoll, Surveyor. CROSSLEY (accepted). No competition.

**SEVENOAKS.**

For Erection of Gardener's Lodge and Outbuildings at Oak Lodge, Sevenoaks, Kent. Mr. H. PERCY MONCKTON, A.R.I.B.A., Architect, 36 Great James Street, Bedford Row, W.C.

KING (accepted)	£575	12	6
For Erection of Range of Hot-Houses, at Oak Lodge, Sevenoaks, Kent. Mr. H. PERCY MONCKTON, A.R.I.B.A., Architect, 36 Great James Street, Bedford Row, W.C.			
BOULTON & PAUL, Norwich (accepted)	£315	10	0



TUNSTALL.

For Building Riding-Horse Stable, Waggon Lodge, Pig-  
geries, &c., Church Farm, Tunstall, near Acle. Mr.  
ARTHUR J. LACEY, Architect.

Bennett	£699	12	9
Evans	696	5	10
Brewster	663	10	0
Cork & Bech	658	18	0
Hawes	581	15	0
Watts	514	2	0
Beck	513	8	0
Dove & Lambert	512	4	4
HURN (accepted)	484	7	0

WREXHAM.

For Construction of Sewer, Ruthin Road. Mr. J. W. M.  
SMITH, Borough Surveyor, Wrexham.

Hughes & Owen, Wrexham	£89	18	3
Collens & Humphries, Wrexham	77	18	9
C. Harris, Shrewsbury	48	0	0
J. Harris, Shrewsbury	44	0	0
HUXLEY, Wrexham (accepted)	41	0	0
Surveyor's Estimate	61	0	0

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all particulars post free. SAMUEL PUTNEY, Baltic  
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10 Elm Street, Gray's Inn Road, W.C.

WAKEFIELD.

For Frection of Grand Stand, for the Thornes Footbal  
Club, Wakefield. Mr. C. W. RICHARDSON, Architect.

Wilson & Son, Bradford	£140	0	0
Loyd, Wakefield	122	0	0
Clark, Wakefield	98	0	0
Ashton, Wakefield	96	13	0
Squires, Wakefield	96	0	0
Brooke & Sons, Ossett	94	15	0
Hanson, Wakefield	94	7	0
Jowett, Wakefield	94	0	0
Land & Nettleton, Ossett	79	15	0
CRIVEN, Wakefield (accepted)	67	9	0

WOOD GREEN.

For Making Road and Sewer on Estate at Wood Green.  
Mr. SEXTUS DYBALL, Surveyor, 35 Bucklersbury,  
Chapside.

Found, Bow Road	£669	0	0
Nowell & Robson, Kensington	650	0	0
Trueman, South Hackney	649	0	0
Bell, Tottenham	625	0	0
Jackson & Son, Finsbury Park	587	0	0
Seaton, Ward & Co., Wood Green	547	6	0

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WARM-AIR  
VENTILATING FIRE GRATE.

The novelty, superiority, and advantage of this patent  
consist in the heating surface being greater than any  
other Fire-grate introduced to the public. It is very  
simple in construction, and is made in the form of a Stove,  
the back of which is semicircular in shape, with gills  
behind and smoke-nozzle on top, all cast in one piece.  
The same can be attached to any design of a Register or  
Stove front. It is very suitable for schools, class-rooms,  
waiting-rooms, hospitals, offices, dormitories, and dwelling-  
houses, from the cottage to the mansion. Design and  
specification post free on application.

TESTIMONIALS.

"9 Victoria Chambers, Westminster, S.W."  
"June 10, 1884."  
"SIR,—I have much pleasure in testifying to the  
efficiency of your patent Warm-Air Fire Grate. It has  
been very successful, and given every satisfaction where I  
have used it."  
"Yours, &c."  
"JAMES WEIR, F.R.I.B.A."

"To Mr. Grundy,"  
"Baptist Chapel, Clapham Common, London. Richard  
Webb, Pastor, 10 Grafton Square."  
"February 15, 1884."  
"DEAR MR. GRUNDY,—I have pleasure in testifying to the  
excellency and efficiency of your patent Fire-Grate. It is  
the most charming invention for heating a large room I  
have ever known. I shall have pleasure in showing it to  
anyone who wish to have their schools or rooms pleasantly  
and efficiently heated."

From James Garry, Esq., Architect, West Hartlepool,  
July 1884.

"DEAR SIR,—I have very great pleasure in stating that  
the first stove, or patent warm-air ventilating fire grate,  
adopted by me in school at Seaton, and a second in a  
Cocoa Palace, have given such satisfaction that I now  
order eleven to be inserted in New Upper Grade Schools in  
course of erection at West Hartlepool. They are the most  
economical, efficient, and easily managed stove at present  
before the public."  
"Mr. John Grundy."

Apply to JOHN GRUNDY, 30 Duncan Terrace, City  
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WOOD GREEN—continued.

For Erection of Villa Residence, Green Lanes, on the  
Bowes Park Estate, for Mr. John J. Hough. Mr. D.  
TAYLOR, Architect and Surveyor, Oak Villa, Bounds  
Green, New Southgate, N. Quantities not supplied.

Harper, Hackney	£1,775	0	0
Yardley & Sons, Wood Green	1,739	0	0
Steven Bros., Seven Sisters Road	1,297	0	0
Kirby & Chase, Hornsey Road	1,290	0	0
Scarborough, Wood Green	1,284	0	0
VOLLER, Wood Green (accepted)	1,258	0	0
Brooks, Wood Green	1,240	0	0
Architect's Estimate	1,278	17	0

WORKINGTON.

For Laying 2,000 yards of Sewer Pipes, Brick Culvert,  
Manholes, &c., Workington.

Fisher & Kirk, Cockermouth	£2,098	11	0
Reid & Son, Carlisle	1,560	10	0
G. Smith, Newcastle	1,525	16	0
Carr, Hexham	1,340	11	0
Taylor, Workington	1,321	19	0
W. SMITH, Workington (accepted)	1,244	19	7

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## BELL'S ASBESTOS FLOORING FELT.

This article is manufactured from specially prepared Asbestos fibre, and by its use any building can be rendered comparatively fireproof at a very small cost. This material should be used as a substitute for brown paper under the carpet, and it can be taken up and relaid as often as required; it may be laid between the flooring boards, on the ceiling before plastering, and on the walls. Doors of pine or other wood should be so constructed as to have a sheet of the felt in the centre, so that either side being burned the other remains intact. In houses so protected fires would be localised to the rooms in which they originate. Asbestos felt, being a non-conductor of heat, is superior to any other sheathing, and used under slates has no equal. It yields no dust, lies quite flat, is soft to the tread, and its low cost places it within the reach of everybody. Made in rolls of 36 inches wide.

## BELL'S ASBESTOS BOILER AND PIPE COVERING COMPOSITION.

For coating every class of steam pipe and boiler. Non-combustible, and easily applied when steam is up; adheres to metals and preserves them from rust; prevents the unequal expansion and contraction of boilers exposed to weather; covers 50 per cent. more surface than any other coating, and is absolutely indestructible. It can be stripped off after many years' use, mixed up again with 20 per cent. of fresh, and applied again. The composition is supplied dry, and only requires to be mixed with water to the consistency required for use.

A horizontal boiler, 17 ft. 6 in. long, 15 H.P., gave the following results:—

Temperature on Plates .. .. 186 deg.  
" " Covering .. .. 94 "

One ton of coal was saved per week, and, although the fire was raked out every evening 20 lbs. of steam were in the boiler next morning.

The following testimonial refers to this covering:—

Offices of Wimbledon Local Board, Wimbledon, Nov. 28th, 1883.  
Dear Sir,—It may interest you to know that we save exactly 40 per cent. in fuel through using your covering.—Yours truly,  
W. SANTO CRIMP, C.E., F.G.S.

**BELL'S ASBESTOS PAINT**, for floors, stairs, and all interior woodwork, to prevent the spread of fire. This paint is especially useful in cotton mills, and in fact in all factories and buildings exposed to risk from fire. It is quite free from poisonous ingredients, and is both easily and cheaply applied. Bell's Asbestos Paint has, on several occasions, done great service in preventing the loss of life and property. The great fire in Buchanan Street, Glasgow, in November last, produced the following testimony to the value of this material:—

Offices of the *Glasgow Herald*, the *Weekly Herald*, and the *Evening Times*,  
Mr. John Bell.

Sir,—As one of the means that helped to save our buildings extending from Buchanan Street to Mitchell Street from the recent great fire, I think it fair to say that your Asbestos Paint, which was applied to the outside hoist of the *Evening Times* case-room and other portions, gave valuable proof that it materially aided in resisting the flames from the immediately adjoining tenement while the fire was rapidly destroying it and threatening us in the most serious form. Since the fire, and to assure myself further of the value of the Asbestos Paint as a fire-resister, I placed a piece of wood, with your paint put on more correctly than in our case, into one of our furnaces, with the result that it was brought out without a fibre of the wood being touched, while similar pieces of wood, thrice coated with Irish Lime, at once got into a flame.—Yours truly,  
(Signed) ALEX. SINCLAIR.

**BELL'S ASBESTOS SASH-LINE CORD** is unaffected by heat and damp, and renders unnecessary the use of metallic wire and chains. Ropes made in the same form have great tensile strength, and being indestructible by fire are of incalculable value for fire escapes.



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The goods of this house are of the highest quality only, and no attempt is made to compete with other Manufacturers by the supply of inferior materials at low prices. All orders must be sent direct to the undermentioned depots, and not through agents or factors.

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For making every class of steam and water joint. It can be bent by hand to the form required, without puckering, and is especially useful in making joints of manhole and mudhole doors on boilers; also for large "still" joints, where boiling fat and steam have to be resisted. It is kept in stock in rolls of 100 feet, from  $\frac{1}{4}$  in. to 3 in. wide, and any thickness from  $\frac{1}{8}$  in. upwards. Manhole covers can be lifted many times before the renewal of the jointing material is necessary. The same material is made up into sheets about 40 in. square, and each sheet bears the trade mark, without which none is genuine. It is very necessary to guard against imitations of this useful material, and to secure themselves against being supplied with these less useful articles at my price, users are recommended to see that every 10-ft. length of the Asbestos Tape purchased by them bears the trade mark.

## BELL'S ASBESTOS CEMENT

for the backing of firebricks and furnaces. The use of this fireproof material saves the expense and annoyance occasioned by the repairs so constantly required in the firebricks and kitchen ranges of private houses. Any labourer accustomed to handle other cements can apply this.

**BELL'S ASBESTOS BOILER PRESERVATIVE.**—This useful mixture, by absorbing the free oxygen that is in the water, entirely checks pitting and corrosion. It also disintegrates incrustation so immediately as to prevent its adhering to the plates. Not only is a great economy of fuel effected by keeping boilers clean, but the risk of having the plates burned is thereby obviated. It has been computed that 1-16th inch thick of incrustation causes a waste of 15 per cent. of coal;  $\frac{1}{8}$  inch thick, 60 per cent.; and  $\frac{1}{4}$  inch, 150 per cent. Thus the Preservative avoids the great risks which are inseparable from scaled plates, lengthens the life of a boiler, and covers its own cost a hundredfold by economy of fuel. It is entirely harmless, and has no injurious action on metals. It can be put into the feed tank or boiler, as may be most convenient. Sold in drums and casks bearing the trade mark, without which none is genuine.

**BELL'S PURE ASBESTOS CLOTH**, for protection against the spread of fire. Iron curtains warp, and in the great emergency of fire will often be immovable. Asbestos cloth, being incorruptible, will remain strong and flexible for an indefinite period, and will stay the progress of a fire and the passage of smoke longer than any other known material. This cloth is also extensively used in Maignen's unequalled water filters, for which a gold medal and diploma of honour were awarded by the Special Commission appointed by Her Majesty's Government to receive the reports of the International Juries at the Fisheries Exhibition. By special arrangement with Mr. Maignen, his filters for houses, factories, and towns are supplied by this firm.

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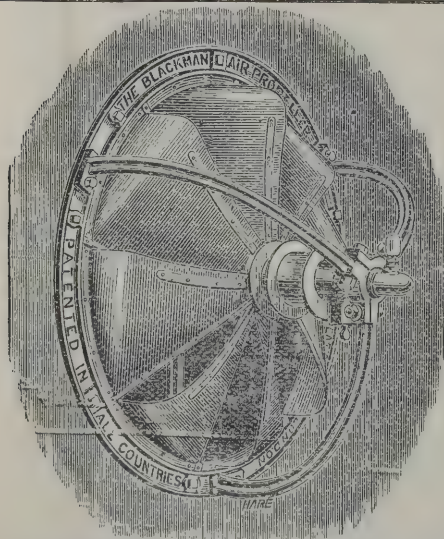
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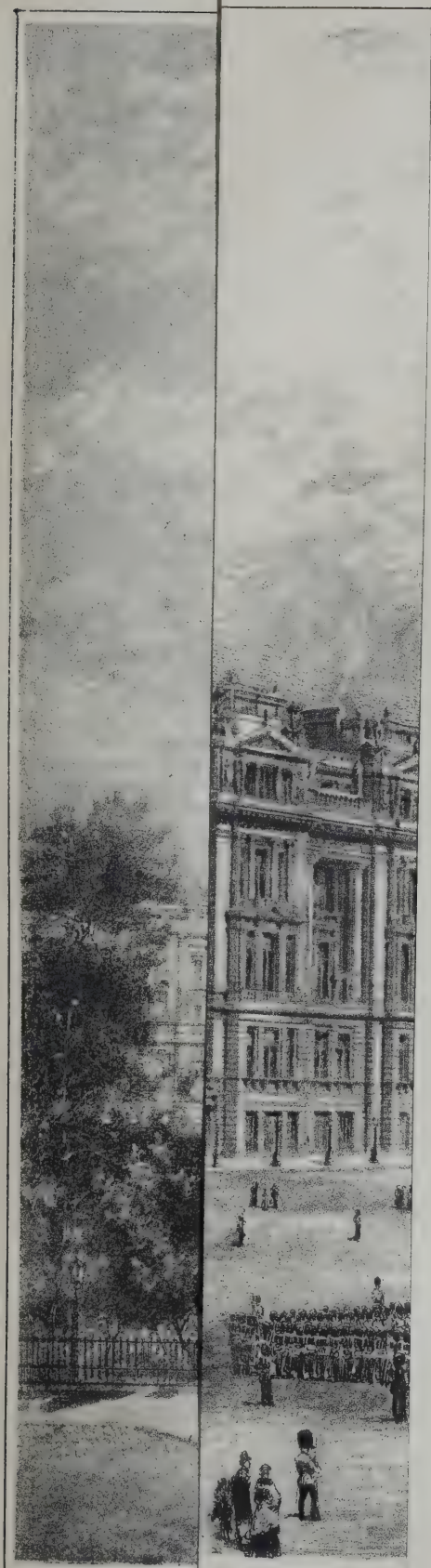
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# The Architect.

## TWO ART-REFORMERS.



LAST Saturday, in two of the chief provincial cities of England, two of the leading authorities of the day on artistic criticism delivered forcible and demonstrative discourses on what may fairly be called highly sentimental, indeed sensational, views of the subject, namely, Mr. BERESFORD-HOPE at Birmingham, and Mr. WILLIAM MORRIS at Manchester. In both instances we may regard the addresses in question as directly challenging the common sense of the many to a public controversy with the uncommon sense of the few. The challenge, we need scarcely say, will not be accepted; it never is. Whether the transcendental doctrine in such a case happens to be conservative or reactionary, as Mr. HOPE's may be said to be, or revolutionary, as Mr. MORRIS's confessedly is, it is always found to be equally vain to expect that the slow but irresistible current of general opinion will consent to pause for its discussion. Mr. HOPE well knows that this great governing influence has long left him in the rear; and Mr. MORRIS probably sees no less clearly that the direction he would wish it to take it will never take. Still it does not at all follow that those who make it their business, or their pleasure, to watch the movement of progress may not derive both enjoyment and profit from the contemplation of even the most visionary of such manifestations.

Mr. BERESFORD-HOPE, "romantic, chivalrous, and unconventional," is now the last of the more learned and accomplished representatives of the principle of Gothic art pure and simple, Mediævalism at any price, the subordination of the free and restless intelligence of the close of the nineteenth century to the dogmatic *régime* of the thirteenth. He takes for his subject, in such a town as Birmingham, and on such an occasion as a meeting of that most modern of all institutions, the Social Science Congress, "the strength and the weakness of art," and he cannot help attempting in effect to show, even in circumstances apparently so unfavourable, that the weakness of art is exemplified in the work of modern times as a whole, and the true strength of art in the acceptance of such models as "the paradisiacal groups of FRA ANGELICO." The reason of this, we are told, is the spirit of self-seeking by which modern artists are animated, as contrasted with the self-forgetfulness of the men of old time, who regarded themselves only as the humble instruments of an influence "from on high." Immorality on the one hand, and morality on the other, are the consequences; and even in such a thing as architecture Gothic is the moral and self-forgetful master of symmetry, while Classic is its immoral and selfish slave. The substratum of truth which underlies this scheme of criticism need not be overlooked by those who happen to be qualified to discern it, if the regret that it should not be turned to some more intelligible account may still be acknowledged.

But, in order to reach the good sense of this matter, it is absolutely necessary nowadays to substitute for the phrase "Gothic"—for it is only a phrase in an argument of this kind—the much more comprehensive idea of all such art as exhibits amongst its other principles those which have been discovered to constitute the merit of Gothic. It is also necessary to give a far wider and more liberal range to the influence of the artistic motive than can ever be identified with the narrow precedents of academical galleries of the Old Masters. It is equally necessary, once more, to content one's self with the less figurative uses of common language; for, however strong may be the temptation to employ plain words like "morality" and "immorality" to suggest profound and mystical contrasts in the handling of a blacklead pencil or the construction of a parlour window, the plain people of to-day cannot be prevented from losing a little temper over such loose terminology, if only on the simple ground that the resources of the dictionary have not been made available for their benefit.

If it were within the limits of politeness to tell the artisans of Birmingham that the weakness of art is most conspicuously

manifested in the qualities expressed by the term "Brummagem," then its strength might perhaps with sufficient certitude be described as consisting in the happily increasing feeling of the day in favour of those elements which are the reverse of mere cheapness and makebelieve, and which, if not questions of "morality," are at least points of honesty in design and workmanship. Even the men whose ingenious lives are passed in the fabrication of the thousand-and-one wooden nutmegs of one kind or another which Birmingham has the credit of producing "for the market," cannot possibly help feeling how much happier it would be to be engaged in work that could hold its head up as honest work; and the real strength of art in England at the present time, we venture to submit, is to be found in the fact that this view of the case is actually being entertained more and more every day, alike by teachers and critics of art, by a purchasing public, by earnest manufacturers, and by earnest workmen. No doubt the connoisseur of a reflective turn of mind, with a slightly paradoxical poetical learning, may find a not unenviable delight in working out the analogies of the matter which the FRA ANGELICOS of rude but honest days of old may suggest, but a much more healthy exercise for Englishmen of to-day may surely be found in the far wider survey of the whole empire of gracious device which now pays homage to the genius of artistic impulse, and in the resolve that, step by step, this empire shall be extended in area by the conquest of fresh territory, and confirmed in loyalty by the cultivation of all the generous sentiments which art at its best delights to encourage.

Mr. MORRIS at Manchester, with a boldness in no way less than that of Mr. HOPE at Birmingham, assails at the headquarters of political economy the whole theory of political economy as applied to the arts. If Mr. HOPE's chivalrous feeling leads him to deplore the self-assertiveness of the typical artist of our day, and to long for the time—if such a time be possible now—when the worker will entirely forget himself in his work, the romanticism of Mr. MORRIS declares for an equally transcendental and perhaps a still more impracticable ideal, in which he sees the worker recognising no "master" but himself, no "employer" but the great commonwealth of art, no trading considerations whatever but the very simple plan that he who makes a thing with his own hands shall bestow it at his own pleasure in exchange for what others make in like manner. By not a few hasty persons this doctrine is disposed of by a single word; it is "Socialism," and Socialism is a word so very ugly that no more need be said. But this is not only hasty but unworthy criticism. What political Socialism may be in any practical form we do not care to inquire; it is enough, perhaps, to regard it as one amongst the many groans of humanity which have always expressed, in one way or another, the dissatisfaction of those who have not with the superior condition of those who have. Mr. MORRIS's doctrine, as we understand it, is altogether different from this. Like Mr. HOPE, he denounces, no doubt, a modern system; and he pleads for the revival of an ancient one: Mr. HOPE would have the academical English artist revert to the productions of FRA ANGELICO, and, by saturating his intelligence with their simplicity, to attain to a frame of mind in which the beauty of self-negation shall become the essence of his own character and the essence therefore of his work. Mr. MORRIS would have the unacademical English artisan attain something apparently like the same end, and by what seems to be something like the same process, inasmuch as the example of Mediæval antiquity is still in question, with the substitution of ancient simplicity for modern complexity. But in reality the end is not the same, nor the process the same. Mr. MORRIS complains of "Brummagem" art as Mr. HOPE does, but he would undermine it, not by reverting to FRA ANGELICO, but by removing the Manchester middleman. Perhaps we may say he would simply abolish, as regards art-workmanship, the whole machinery of commerce. He would at any rate return at once to the system—the crude system we should now call it—of the Middle Ages, when every artisan was a small master, and there were no great factories, wealthy firms, joint-stock companies (limited), brokers, buyers, salesmen, agents, but the little workshop only of the thoughtful and skilful craftsman, where nothing was done but craftsmanship of the best, nothing done except in leisure and for the love of it, nothing sold but for the honest penny, in simplicity, in modesty, and in such true manly dignity as can never live in an atmosphere of nigger-driving manufacture and counting-house artifice. A dream this, no doubt, which is never to be realised, but one



which nevertheless it is pleasant to contemplate. And profitable, too; for, amongst the byways if not the highways of modern artisanship, may we not hope to see as the result of such dreaming, if not a return to the simplicity of the old time, some reform of the complexity of the new that may be equally beneficial?

It is always a pleasure to listen to the opinions of thoughtful, earnest, and accomplished men who are bold enough to be thus candid with the faults and foibles of their own generation. This world of ours has done a good deal in its day, but it has much more to do; and, even when reforms are the most impracticable, they may be none the less worthy of their share of attention.

## THE SOCIAL SCIENCE CONGRESS.

[BY A CORRESPONDENT.]

THE Art Department of the Social Science Congress just ended at Birmingham has more than held its own among those whose numerous meetings have been contemporaneously held in that town from the 18th to the 23rd of this month. Indeed, the interest evoked by its proceedings has increased steadily from day to day, until at last its place of meeting became filled to overflowing, somewhat, it is to be feared, to the prejudice of other departments, whose deliberations, however valuable, proved less popular.

The tact and humour of the President of the Art Department, the Right Hon. A. J. B. BERESFORD-HOPE, M.P., conspicuously displayed in the early days of its session, no doubt contributed in no small degree to the success which on all sides was allowed to have attended its proceedings, and excellent order was preserved throughout in consequence, although many of the subjects considered in it were of a nature to admit of, and certainly evoked lively discussion and much variety of opinion.

Mr. JOHN P. SEDDON opened its proceedings on Thursday, the 18th, by answering very distinctly in the affirmative the special question which had been entrusted to him to deal with, that, namely, as to whether elementary instruction in drawing ought to be made an essential part of the national education. The same view was subsequently maintained in other papers by Mr. ROWLAND HAMILTON and by Mr. CHARLES G. LELAND of Philadelphia, and by Miss S. SOPHIA BEALE; nor was it even challenged by any of the speakers. Mr. SEDDON argued, and Mr. LELAND proved from his own experience as an art teacher in America, that the proposal was both practicable and desirable. Indeed, every one allowed that the moral and commercial advantages of being taught to draw were so obvious and great for all classes of the community, that it ought to be undertaken, and that at the public cost if necessary for those who were unable to afford it for themselves. This technical question, therefore, thus raised in this department, may therefore fairly be considered as proven, since no attempt was made to disprove it. But as regards the method of carrying out the object, Mr. SEDDON declared that it must be, to become practically useful, on very different lines to those adopted in the Government Schools of Design at South Kensington, and those now in relation therewith. He vigorously denounced that character of elementary instruction which has been misnamed, as he averred, "*freehand* drawing," and which is derived from the copying of drawings instead of drawing from objects directly. The system, it is true, is already falling into some disrepute, and consequently pupils in the present schools of design are allowed to escape from it earlier than used to be the case; but if drawing should become part of national education it would be mainly in consequence of its advantages in regard to technical improvements, and must then be of a right kind, and not such as would give a wrong bias to subsequent studies. This, he contended, that free-hand drawing had already done, to the greater prejudice of all art in this and other occidental countries as compared with oriental ones; and he instanced as evidence the fine clear line drawing of the Japanese as compared with "Impressionist" brush smudges, which did duty for all but the highest art of Europe. The several writers concurred that correct observation by the eye, with careful delineation by the hand, should be the aim of the elementary instruction to be given. Mr. LELAND described at length the efforts he had used to teach design to children of both sexes in America, with the special view of encouraging young originality, and obtaining a prac-

tical and even remunerative use for the productions of his pupils, and certainly gave some startling facts as to the results. We cannot, however, but own that we should be anxious to see the quality of the designs spoken of. These generally Mr. LELAND described as being founded on the vine, which Mr. HOPE contended should be called in English the grape-vine. We do not doubt that such results are useful educationally and otherwise, and translated into wood, metal, and other materials by the pupils commercially valuable to a certain extent, but it is questionable whether a design so manufactured can be of a very high class.

Mr. TAYLOR, the able headmaster of the Birmingham art schools of design, while allowing much truth in what had been said as to "freehand" studies, gave an interesting description of the nature of the drawing taught under his direction, whence it would appear that he has come practically to much the same conclusion, and had modified his practice accordingly upon his own responsibility and with marked success. This experience, however, does not in any way dispose of the necessity for some recognised modification of the present system in vogue, particularly if it should be made the basis for any such extended elementary instruction in drawing as was contemplated by this special question in the Art Department of the Science Congress.

Mr. HAMILTON's paper approached the same subject from other points of view, and he also urged a trial of the experiment of making drawing a universal acquisition, as did that of Miss BEALE, who gave some amusing criticism of former methods of art instruction in ladies' private schools, and even now given generally to amateurs.

On the following day, the 19th, the department was occupied with questions relating to music, when admirable papers were read by Lady MACFARREN and Mr. W. DE MANBY SERGISON, which attracted a considerable audience. These were followed by one of a really notable character by Mr. P. H. RATHBONE, the energetic honorary secretary of this department. The subject treated of was "The Place of Art in the Political Economy of a Nation."

In view of the ever-increasing competition England has to meet from foreign countries where living and wages are less, he maintained that we should have to relinquish many of the commoner manufactures, and must learn to supply their place by others in which art and intelligence had more scope—that, in fact, we must learn rather to do good and beautiful than simply cheap work, and he considered that a remedy for over-production, from which we certainly suffer, would be found in the employment of some of our population in the production of luxuries for the rest. If a taste could be widely aroused for objects for the decoration of the homes of the multitude, he considered that a demand for artistic work would be created, the supply for which would ultimately overflow the limits of the country itself, and thus give rise to an export trade of great importance in various points of view. It is to be regretted that the reading of this paper was so late in the day that no discussion was then possible. The view taken by the writer is one which Lord BEACONSFIELD is known to have taken, and such as, under present circumstances, is well worthy of careful consideration. To carry it into effect would necessitate the training of the masses in the manner suggested by the authors of the several papers above referred to.

The President, Mr. HOPE, opened the proceedings in his department on Saturday by a remarkable and interesting address upon "Art," and which was highly appreciated by a larger assembly than ordinary.

He defined art in the words of the Book of Wisdom as "an understanding spirit, holy, one only, manifold, subtle, clear, undefiled, plain, not subject to hurt, loving the thing that is good, quick, which cannot be letted, ready to do good." Such being its noble character, really fine art, he maintained, could never be immoral. Selfishness constituted the weakness of art, and hence only it became sensual; but in proportion to its forgetfulness of self, and as it became the helpmate and herald of morality, it is divinely strong.

In illustration of the above, he drew a contrast between the work of RUBENS and FRA ANGELICO. The first, able artist though he was, betrayed weakness in endeavouring too generally to show what he could do, instead of what he ought to do; whereas the strength of the latter lay in his absolute conviction and devotion to his ideal of religious art, and entire negation of all thought of himself. In architecture Mr. HOPE drew a somewhat similar contrast between the spirit of Classic and Gothic,



the position of the latter being, as he maintained, far stronger than that of the former, by virtue of its construction. Grecian architecture, perfect in its time, was limited in its power, and impossible now from its ignorance of the feature of the arch, which has become an essential. Roman architecture was but a compromise, as it used the arch in form, but had not incorporated its spirit. Really strong architecture sprung from consideration of the plan first, and this it clothed afterwards with beauty. Symmetry in Classic was a tyrant, but in Gothic a servant. The style in present vogue called, not altogether correctly, by the name of Queen Anne, was Gothic in all its strong and good points, and Classic in its weaker and worse ones. Morality of construction and morality of composition were the essence of architecture as distinguished from building, and if engineers were to usurp one important branch of the work of architects, it was incumbent on them likewise to combine beauty with utility in their work.

Subsequently, on the same day, Mr. T. C. HORSFALL read a reply to the question propounded, as to whether local governing bodies were justified in expending large sums of public money for the purpose of beautifying towns, and of providing parks, playgrounds, and other facilities for public recreation, and if so, as to what should be the lines on which they can most advantageously work. This paper was followed by a cognate one by Mr. R. HUNTER, entitled "Suggestions for the better Preservation of Open Spaces."

As to this subject, although difference of opinion was expressed as to the wisest method of raising the requisite funds for the purpose, all writers and speakers were agreed as to the absolute necessity for such provision, and the consequent obligation of municipal bodies to give ample opportunities for recreation for the people, and that they should look far ahead, as is done in America, so as to secure ground for the purpose, while it can be obtained in suburbs at a moderate price, and that all existing appliances of the kind should be utilised to the utmost, as for instance by throwing open School Board playgrounds on holidays and in evenings.

There was a very large attendance on the 22nd in the department of art when Mr. NEALE SOLLY took the chair, and Mr. WALTER BESANT, the popular novelist, read a paper to show "How best a love and appreciation of Art could be developed among the People." His experience in the East-End of London had led him to consider that the Bethnal Green Museum, taken as a type of its class, had signally failed to produce its desired effects upon the people in its neighbourhood, mainly because the objects in it were not of a character suited to their comprehension and tastes, and because no attempt was made to describe or popularise them. In these days of volunteer effort, he felt sure that there were many able and willing to preach art to the people by pointing out to them what they should admire, and he advocated the establishment of a society for the purpose. The Rev. W. TUCKWELL followed with a very racy paper, in which he amusingly characterised the substitutes for art which did duty for the decoration of the homes of the poor, and he urged that the attempt should be made to elevate the masses and teach them better taste from a Christian rather than from a merely philosophic point of view; and he showed by examples at how very moderate a cost far better and more beautiful objects could be supplied to them than those to which they had become accustomed. In the discussion that followed, the comparative failure, if failure there be, at Bethnal Green, was accounted for by the fact that the museum was not opened on the only day that working-people could make use of it.

This view of the subject was further entertained in a voluntary paper which followed, and led to the most lively discussion of the session. It was entitled "A Day of Leisure Art's Opportunity," and read by Mr. THOMAS E. POWELL, London Trades' Delegate, &c. It put very fairly the arguments on the side of the opening of the museums on the Sunday; and Mr. MARK H. JUDGE afterwards moved a resolution to ask for information to be obtained with the same object in view. An amendment in opposition to this was proposed and vigorously supported by Mr. CHARLES HILL, Secretary of the Lord's Day Rest Association, and seconded by Canon BOWLBY.

After a very animated discussion, controlled with admirable tact by Mr. P. RATHBONE, who occupied the chair, a decided victory was gained by the advocates of the opening of the museums on Sunday, as the resolution of Mr. JUDGE was carried by a majority of 86 to 4.

The proceedings of the Art Department were brought to a very brilliant conclusion on Tuesday, the 23rd, by a voluntary paper on "The Drama," by Mrs. KENDAL. The President of the Congress, Mr. SHAW-LEFEVRE, occupied the chair, and the place of meeting was filled to overflowing. The paper—read, as might have been expected, with more than usual charm and force—was a capital and well-written one, and dealt with the improvements and the reverse which characterise the drama of the present day. The subject being other than appertains specially to our journal, we need not describe it, or the discussion that followed, further than by saying that the former was candid as well as apologetic, and did honour to the fair and talented authoress, who had taken the opportunity of bringing forward several matters affecting the condition of her profession and its relation to the public in the best possible spirit.

Thus happily concluded what we are glad to be able to say has proved a very successful session of that branch of the Social Science Congress in Birmingham which naturally has the greatest interest to the readers of this journal.

## HOLIDAY PAPERS.—LIMBURG AND THE LAHN.

THE Lahn must rank second only to the Mosel among the beautiful tributary rivers of the Rhine. Like the larger stream, its devious wanderings break up into picturesque masses, wooded hills, and craggy cliffs of considerable height along its course; little towns with dominating castle or ancient church are quaintly set here and there on the banks; and half-way between source and outfall one of the finest Romanesque cathedrals in all Germany, the Limburg Dom, rises proudly on a precipitous rock, and sends the reflection of its many towers into the brimming river.

The *Brunnen* of Ems, a short way from the mouth of the river, can attract yearly a crowd of visitors, who indulge in the busy idleness of a fashionable resort, and carry the dress, the gossip, and the luxury of town life into this pretty colony of *pensions* and lodging-houses, languidly broiling on either side of the Lahn beneath the steep foliage-embowered cliffs. More enterprising and less conventional folk advance another stage up, and make Nassau their resting-place for enjoyable invalidism and easy excursions. Here the charges are moderate and the life *sans gêne*. The village would be more picturesque if the houses were not whitewashed and slate-roofed; but the situation beside the river, between two wooded hills, is charming. The capricious windings of the Lahn cut up the ground in varied lines, isolating some of the hills into pictorial prominence.

On one of the steepest the ruined tower, some shells of hollow masonry, and an entrance-gate of the old castle of Nassau, rise above the muffling beech-woods. At the slope of the hill over against the pretty village of Scheuren and its running stream are remnants of wall and corner towers, and in Nassau like fragments attest that both town and castle-domain were once enclosed and fortified. Beyond Nassau the average tourist does not trouble to penetrate up the stream, the railway as a cross-line not being of much use in the ordinary routes. Yet for its emphatically picturesque scenery the Lahnthal is well worth visiting, and offers capital ground for such a short holiday ramble as must often be all that busy men can snatch from professional work. We should recommend taking the stream downwards from Giessen, itself a dull university town, but a convenient halt from Cologne, and within easy reach of Cassel, Marburg, and other interesting places.

Wetzlar will be the first point on the Lahn at which note and sketch-books must be unpacked. The townlet once was important enough to be scrambled for in the many internecine wars and foreign invasions of Germany; it was the seat of the Imperial Diet in the seventeenth century; it had lofty walls and towers, and five city gates. But of all this there now remain only a few fragments of masonry and part of one gateway. The town lies in the hollow and on the slopes of a hill above the river, and has a *Vorstadt* for the people engaged in local industries, chemical and ironworks, on the low ground. A fine old stone bridge, survival of the fourteenth century, unites the two portions of the town; above, on an elevated plateau, stands the curious old red stone church, half in ruin as it has stood for centuries, and on the other side of the town a lofty tower, known as the Kals or Karls-munt, is a picturesque object



on the summit of a conical wooded hill. GOETHE has immortalised Wetzlar and the pretty villages in the neighbourhood in the pages of his "Werther"; LOTTCHEN's house and room are shown to tourists, and a Russian general during the NAPOLEON wars carried off as a treasure to St. Petersburg an urn, which an enterprising innkeeper had set up at Garbenheim to the memory of the original WERTHER, and had found it answer to pass off as the gravestone of the love-distraught suicide. The place is very pretty, although few architectural features are left, and from the river, full of green islets and dropping reflections of the bridge, the hills and the cathedral make a good subject for the sketch-book.

The chief interest, however, centres in the church, which has been called "a chapter in stone on the growth of German architecture." The foundation dates from the ninth century, but the oldest erection of which tangible evidence remains cannot be earlier than the twelfth. The kernel of the edifice is Romanesque; the apse and part of the choir show the round arches and proper mouldings and arcading of the Transition, but the earliest piece with which the curious porphyry font may be contemporaneous, is evidently the fine old entrance door at the west end, inside the uncompleted western façade, and towers of a later period. This portal, in a grey stone weathered with orange stains, has a composition of coupled round arches, with rich square abacus to the round columns and side shafts, sculptured with honeycomb and birds. The moulding of the enclosing arch is a massive sort of billet, and massive cushions head the roughly-moulded shafts. At the side of this entrance is heaped up, like a fallen avalanche, a huge mass of masonry in black basalt, all that remains of the *Heidenthurm*, which the builders of the fourteenth century tried in vain entirely to demolish when they began the new Gothic work. Nothing could be more picturesque than the aspect of this curious old doorway and the molten-looking mass of ruin beside it, all played into by ruddy reflections and dancing lights from the unfinished sandstone western end open to the sky. The Gothic work extends over a considerable period, but the greater part is fourteenth and fifteenth-century work, with delicate and rich mouldings, and abundance of figure sculpture—all in red stone. Attempts at various times have been made to finish the church, but the beautiful tower at the south-west angle, with its richly-adorned portal, has never reached its final stage, and is capped by a hideous erection of the seventeenth century, used as a house for the guardian; the whole of this western façade is incomplete, and fast breaking away. The tower over the north transept is partially destroyed, and throughout the exterior the patchings are many and various. Within, colour-wash and alterations have disguised a fine interior. The massive nave pillars are left, but the effect of the octagonal apse is shut off by a solid stone organ-screen that serves to divide the portions of the church set apart for the Catholic and the Lutheran worship. Wetzlar early gave partial adherence to the doctrines of the Reformation; and the conflicting interests of the religious bodies who both lay claim to the parish church, the strife of political parties, the ravages of war, and the fallen prosperity of the place, have hindered any solid effort to restore or complete the *Dom*. The industries of Wetzlar are said to be now rising in value, and the fear is that utilitarian enthusiasm will eventually lay hands on the edifice, and spoil a condition of things which is intensely interesting and seemingly picturesque. Completion would certainly imply destruction in this case, especially at the western end. One is half-disposed, therefore, to hope that they may let the *Dom* at Wetzlar be.

The hills which on the north-east of Wetzlar retreat from the river, leaving a tract of arable and corn land, wooded knolls, and patches spotted by villages and farms, and overlooked from behind the lower ranges by the conical purple peak of the Gleiberg, close in as you go down stream. The river plays hide and seek in its capricious doubling and winding about the rich woods of beech and fringing acacias. At Weilheim the pretty château rises from the waves of foliage; then to beech succeeds oak, and to sandstone succeeds limestone. At Villmar the marble quarries sparkle in the sun, and presently we stop at Runkel, for here there is good sketching ground. The village lies on both banks, but chiefly on the west, where the houses are set at all sorts of angles on the lower ledges of the steep crag, weather stained almost black in exposed surfaces, on which is built the old castle of the Princes, a massive pile, partly habitable, partly in ruins, having two tall square towers and one hexagon, and fine solid flanks of masonry

to the cliff. The river makes a sharp bend round the crag, has a fall and a backwater, and is crossed by a splendid old bridge with five arches and noble round buttresses. The *ensemble* from the opposite bank or half-way up the rocky cliff facing the castle is most striking, and, according to the simple hostess of the rough little inn by the bridge, attracts many artists. We saw none, however, nor any sign of tourists. The accommodation is of the roughest here, a contrast to Wetzlar by the way, where in the once handsome dwelling-house on the Buttermarkt, now an hotel with the name of the Herzogliches Haus, we had slept in the former ball-room with five windows, amid the mirrors and gilt consoles of former splendour, and dined under the auspices of a first-rate *cuisine*, though the establishment boasted but one waiter. Besides the larger views there is detail to profitably detain the artist in Runkel about the houses and castle; the village up on the hill has pretty woodwork in window and timbers, and a pile of conventual building stands picturesquely on the edge of the cliff. Between Runkel and Limburg rises on a crag, sheer above the Lahn, the ancient mother church of Dietkirchen, whose severe, simple Romanesque forms, lofty western towers and impressive position, give the model for the great pile at Limburg, built also on an isolated rock above the river. Beyond Limburg, a few notes on which shall complete our sketch, is some of the most striking scenery on the Lahn; for example, Dietz, a quaintly-built little town, closely packed into a hollow, with the old feudal castle on a rock in the very heart of it; its square, central tower, with corner turrets and grim flanks of wall, showing warm orange, lights and grey shadows on the yellow stone of which it is built. Further on the hills are split up into ravines, and on a crag in one deep cleft stands the famous Arnstein, a picturesquely impressive example of the many towered and fortified residences of the Middle Ages hereabouts.

(To be continued.)

## THE STRENGTH AND THE WEAKNESS OF ART.\*

BY THE RIGHT HON. A. J. B. BERESFORD-HOPE, M.P.

IT will not, I think, be inappropriate to commence the artistic discussions of this Congress with an inquiry, as brief as the subject can admit of, into the strength and the weakness of art.

But first of all I am bound to answer the underlying question:—What is that so-called art for which I predicate the possibility of such opposite qualities? In working out the definition I shall, I believe, make good way towards dissipating the difficulties which it is my object to bring before you and to clear up.

Counsel has on this head been much darkened by a frequent confusion which has existed between art on the one hand, and on the other the objects and methods of art. Objects of art are manifold—such as pictures, sculptures, buildings, furniture and other component parts of buildings, wall decorations, and so forth. Such, too, is the case with the methods by which art makes itself palpable. Art itself, on the other hand, is the one informing, harmonising, life-giving spirit, which runs through all the visible creation, binding all together, and presenting the result to the view of intelligent minds in shapes which are, both as a whole and in parts, useful and appropriate for the object of their existence, and lovely to the eye of the beholder; the usefulness and the loveliness being consistent with and supporting each other.

But why do I attempt to define art in my poor language, when I can refer to a definition, in the first place, indeed, offered as of wisdom generally, but which can rightly be for my present object limited to that branch of wisdom which is called art? It exists in a book from which no man who seeks it for teaching goes away empty. I mean the treatise which is truly styled "Of Wisdom."

In this we learn that wisdom, for which I substitute art, is "an understanding spirit—holy, one only, manifold, subtle, lively, clear, undefiled, plain, not subject to hurt, loving the thing that is good, quick, which cannot be letted, ready to do good." Art also is "the breath of the power of God, and a pure influence flowing from the power of the Almighty; therefore can no defiled thing fall into her;" for finally, "God loveth none but him that dwelleth with wisdom," of which wisdom, art, I assert, is the visible sign. In all this I beg you to notice, for it is the foundation of my position, that the art which is thus presented to us all-pervading and universally powerful is yet, as the very definition notes, not some-

\* An address delivered at the Social Science Congress, Birmingham, on Saturday last.



thing which exists in selfish isolation, as it were, for its own glory and benefit, and without regard to the conditions of the world which it has been sent into to assist and benefit.

You will, I hope, have taken notice of one definition in my quotation from the Book of Wisdom. Wisdom, or (under my limitation) art, is described in our English version as an "influence." It is an "influence" in its action upon all which comes under that influence. But once it has been brought into an active condition of influencing, it may be regarded in another light, and another descriptive epithet may be employed. Being an "influence," it is also an "attribute."

I have hitherto been trying to define art, with the help of the English version of the Book of Wisdom, but I must note that the original Greek, which is with us freely rendered "influence," is *ἀπόρροια*, or a "flowing from" more literally. This gives us further idea of an emanation from some higher power, *emanatio*, in the Vulgate version. It is emanation in reference to the originating power, and influence in reference to all upon which it flows.

I have now reached the point to which I want to lead you. I despair within my short limits of being able to present a rigorous proof of my position. But I hope to give you a few examples tending to show that when the artist, forgetting himself, but respecting his art as a healthy attribute, uses it as an emanation from on high, and an influence of truth, then it is strong. When he worships himself, and deals with his art as if it were the end as well as the means, then that art must be weak.

Accept art as an influence, and you must confess that it will be the minister of good or of evil in proportion as it affects wholesomely or balefully the substance to which it finds itself attributed, in proportion, in other words, as it is true art or false art. Very clearly then it must be accepted as an especial engine of God's moral government of the world, and in proportion as it is the help-mate and the herald of morality it is strong in a divine strength, and in proportion as it forgets its work of influencing, and, instead, affects to domineer and to substitute itself for morality, it becomes weak, unstable, and treacherous.

This is a position on which I very emphatically insist. It is important at all times, and it never was more so than in the present day, when æsthetic perceptions—for the old word "artistic" is quite out of fashion—would, if we would believe the depth or precision of thought of excited and gushing votaries, seem ready to pose as the substitute of old-fashioned morality and generally accepted common sense. As you love art, and if you love art, resist this. True art never can be immoral, for it remembers of what it is the influence. False art, that is, art which thinks of itself and not its mission, has only self to rely on, and self's perceptions; and in its weakness it must become sensual.

I have, as you will remember, interposed a caution against art and the methods of art being confounded. I advance no claim to be a critic of pictorial art, for my art studies have mostly been in another direction. But it is a great happiness of my life to be an admirer of pictorial art, and while, as I am very conscious, unable scientifically to describe methods, I feel their power and bow before them. The pleasure I believe to be genuine and wholesome in cases as to which I should not be able to answer the charge that it was a pleasure arising not from the art we recognised, but from the more visible excellence of method, or from an admiration—to put the matter as shortly and as clearly as I can—for the composition, the colouring, and the expression of a picture, in which, however, the stern sense of what art—taken at the highest—meant, would compel us to acknowledge that something was wanting to complete the noblest attributes. It is, in fact, because I desire to protect and to place at its sufficient, though not extravagant, level that appreciation of the methods which it is necessary to preserve towards the general well-being of civilisation as the appreciation of excellence in any other pursuit, and at the same time to vindicate the moral strength of abstract art as a thing apart, that I have dared to embark upon the present discussion.

I am conscious that, in drawing this distinction, I may lay myself open to be asked how I can really define between the higher abstract art and its visible processes and manifestation. To confess that I am conscious of the difficulty will, I hope, be taken to show that I have some tangible idea present to my mind for which I desire to find expression, and that I may not be reminded of that difficulty which the wit of the eighteenth century conjured up as to conceiving a lord mayor without a lord mayor's accessories.

As illustrations of my meaning, I will bring before you two painters, one of them confessedly great in all the attributes of art except, I venture to contend, the very highest, and, through his defects in that respect, liable to be summoned, as I do, to appear as an example of weakness; and the other one, whose perfections, unique as they are, have no vestige about them of the heroic, but, just because they are not heroic, are so absolutely self-forgetful in their enthusiastic devotion to all which is right and pure, as to win for their creator the claim of being cited as showing forth the strength of art.

*Peter Paul Rubens.*

Rubens, handsome, well-born, endowed with a quick intellect and unflagging spirits, accomplished, winning and popular, the favourite of kings, the darling of his countrymen, the worship of a

brilliant host of pupils, as capable as they were devoted, was, if ever there had been one, a spoiled child of fortune. His prosperity was well deserved, his spoiling was but too natural, and it is that which justifies me in producing him as an example of one whose weakness came of misdirected efforts after strength.

All which we read seems to show that Rubens' own disposition was a noble one, and we find in his religious pictures no absence of that quality of reverence which is far too often wanting in the artistic temperament, while the deficiency spoils works of art which might otherwise have been masterpieces. But because Rubens was reverent, was he therefore religious? These two qualities are not quite identical, for reverence is more an intellectual attribute, and needs only imply, in the painter, the appreciation of the serious treatment which the subject demands. The religious nature draws its inspirations from the heart as well as the head, and secures the success of the treatment by a true appreciation of means. There is something more positive about religion than about reverence, and it was just this positive quality, involving the abnegation of self, that Rubens never quite succeeded in reaching. It was always the scene, visibly and intentionally presented with pomp of colour, force of action, realisation of humanity in its material greatness by the artist whose creative faculty we are not allowed to forget for a moment.

In thus urging the simplicity of true self-forgetfulness, Rubens only did not rise superior to his age and to the strange confusion of divine and human things which marked the Renaissance. How strange, for instance, according to our notions, is the habit of heaping pictures with gorgeous but incongruous accessories, in the use or the abuse of which Italy knew no moderation! No doubt, too, we have all of us consciously condoned the splendid anachronisms of the southern pencil. In fact, we have laboriously taught ourselves that there is no incongruity about it. For instance, Paul Veronese's *Marriage at Cana*, on which we all gaze with such delight, is a feast in the palace of a Venetian nobleman, impossible in its magnificence even for a Venetian nobleman. It is, in fact, hardly incongruous, because it is so very incongruous. It would be crass and dull to ask, But were things done that way at Cana? But Rubens, unquestioned despot in another country, had it in his own power to make or break traditions, and he deliberately came to terms with the anomalies of the Renaissance.

But here I might explain that I hold no brief for that realism which believes that a scene which appeals to the sentiment of all ages and all lands is to be appreciated according to its conformity to the requirements of chronology and geography. This pedantic accuracy may result in mistaking the means for the end, and sins accordingly against our fundamental definition of art. Chronology and geography are excellent things, but piety and imagination are better. The influence which we are bidden to look for works through emanations from them as it does not through chronology and geography. Just as you would, I am sure, be willing to exchange any number of Macbeths as we now see them, in all the precision of barbaric archæology, for John Kemble as he stepped on with his nodding ostrich plumes, so you would be very sorry to see the desire for accuracy, laudable as it is, whenever it is attainable, degenerate into the pedantry of an ultra-realistic clique.

It is not the Venetian dresses or the palatial architecture which requires to be explained in Veronese. You might embody the whole human sentiment which is aroused by the supper at Cana, in Venetian garb, and provide an arcade by way of background. The emanation would be equally pure and fresh. The weakness of the picture is that in the pomp of the accessories the interest in that divine event has been allowed to evaporate. The dresses at the Ammergau Passion Play were conventional, and appreciably founded on types picked up in Renaissance art, but the intense reality of the acting blotted out all anachronisms, and we were more actually in the Palestine of eighteen hundred years ago, than if a congress of sceptical archæologists had sat upon every group. We have hitherto been dealing with Rubens as a religious painter. But his weakness in showing what he can in preference to what he ought to do was not confined to his religious pictures. He was, I suppose, at his weakest in that strange sprawling ceiling of Lord Jersey's, which was exhibited this year at the Old Masters. But it is not fair to judge him by this. Let us turn to an acknowledged masterpiece. He had to paint the triumph of a French queen, who for the purpose of art was everything which was noble, pure, and magnificent. It is no part of my task to depict the actual character of Mary de Medicis. Accordingly, the most appropriate compliment he could pay her was to show his mastery of the undraped body, by crowding her up with a bevy of handsome but most coarsely conceived naked women.

*Fra Angelico.*

Such is Rubens, great and strong as a man of genius, as an artist weak in proportion as he yielded to the weakness which is the doom of the man who places himself before his appointed work. With whom shall I match him as the exemplar of the strength which conscience and duty vigorously performed bestow? Let me take you back rather less than two hundred years from the days of Rubens. We shall then find in a convent at Florence a gentle, guileless, unworldly friar, industriously and contentedly working away at his daily toil of commemorating sacred subjects



on a scale which was mostly but little removed from miniature, in pictures full of grace, in face and in person full of gentle undulating motion and full of expression, and all presented by tints of peacock-like radiance, and enhanced by bold but yet harmonising contrasts—the very painter born to dream of paradise, who made paradise his favourite theme. What strength can you find in all this? I shall be asked. It seems very meritorious, but it does not sound very strong. So without hesitation I reply that strength of absolute conviction, that strength of a duty to be done, without stint, without delay, and without repining, that conviction that it must be done without one passing thought of self, of pelf, of renown, or of worldly advantage, all centreing in a mind rarely perceptive of and able to embody pictorial beauty, have in the world of art won for the blessed brother John of Fiesole his unique place among the world's greatest painters.

But do not mistake me. I should be sorry if you supposed me arguing that Fra Angelico, because strong as I define strength, was therefore altogether strong. On the contrary, in various important functions of art he was unmistakably weak. He was weak when dealing with the violent and vicious passions. His devils are grotesque and often almost comic. But these shortcomings serve to illustrate the position that strength in art is unselfishness, forgetting self and self-glorification in the direct and unadulterated purpose of the art itself. In paradise Fra Angelico did so—when in a different place he forgot the condemnation upon him that sets his hand to the plough and looks back. Cruelty, coarseness, and lubricity were infinitely disgusting to his pure nature, and so he did not sufficiently recollect that by his profession of painter and by his choice of subject he had bound himself to defeat them by exposing them. Holding the mirror up to nature was a law which had not yet been formulated in his day. The exposure was not complete, so the defeat failed, because the painter was forgotten in the friar.

There is a legend touching Fra Angelico's practice, which it is difficult to believe in its literal extent, but which has probably a substratum of truth, namely, that working in the pious enthusiasm of his mission, he refused ever to paint over again what he had once done, or to correct a stroke. Such gentle confidence is against accepted canons of art, and the moral which I should draw from the story is, that the painter who could be believed to work upon such a method, and yet secure the fame which is his pious inheritance, must indeed have been strong.

Let me by the way call on you to remember how much the world had learned between Fra Angelico's time and Rubens' days, in technical processes, in the laws of perspective, and so forth. It is not a little because of such inevitable disadvantages, mastered as they are by his genius, that I proposed Fra Angelico as an example of strength. So it is also with regard to his magnificent capacity, helped by his superior advantages, which induced me to point to Rubens as one whose great powers, nobly as they were exercised, yet fell short of that excellence which he might have reached if he had not, in always measuring his strength by its personal relations to his own glory, failed in the strength which comes from the emanation from on high, and is the healthful influence guiding the noblest minds.

I trust that it will not be imputed to me that I desire to depreciate the glorious power of Rubens, or to insinuate that all outside the paradisiacal groups of Fra Angelico is unholy ground. Such an imputation would directly falsify my conviction, and obscure the great truth on which I insist, that the greatest genius is fallible and the widest range circumscribed by limits as invincible as they are invisible. If we could conceive the painter who would combine the excellence of Rubens and of Fra Angelico, then that Phoenix of the Ages might be taken to represent all the strength of art, and as little of its weakness as this probationary condition admits of. But if it be objected that the man has already lived and that his name is Raphael, I shall not busy myself to contradict or to confirm the assertion, but, varying the phrase, invite you to face the possibility of the artist arising whose great reconciling touch shall combine the force of Rubens, the sweet purity of Fra Angelico, and the faultless proportion of Raphael.

#### Architecture.

Now, then, let me call you away to consider the strength and the weakness of art under other conditions, and in a different field. We have been testing it as it has shown itself in painting; let us now follow it up in architecture.

I have, as you will have seen, placed the question of weakness and strength in reference to painting upon the conformity or divergence of the artistic product from an ideal, the closest representative of which, allowing for the poverty of language in lending itself to abstract thoughts, would be morality. As no painting has a material or constructive duty to fulfil, this morality has nothing to do with material considerations. With a building, which has its mechanical end, and regarding the product of architecture as both an art and a craft, the material morality of construction and materials comes in no less than the immaterial morality of composition, and, to make a short story of it, the test of strength in architecture as an art is the success and completeness with which these two moralities are combined—the morality that is of construction, and the morality of composition. To this may, after all, be

reduced that conflict of wonderful persistence, wonderful acrimony, and wonderful interest to those engaged or interested in it—the battle of the styles, or, in fuller terms, the comparative merits of the styles which we may loosely tie up together as Classical and those which we may as loosely tie up as Gothic. In this division of opinions I have long consistently and strongly taken my side with the advocates of Gothic. But I have striven to do so in the spirit of a partisan by conviction and reason, and not of one who was intervening in a faction fight. It is not, of course, my part to find fault with the grand energy of men on whose side I am myself contending, and I have not the least doubt that if Pugin, or Mr. Ruskin, had been more cold-blooded he would have influenced less and done less. For my own part, however, I am anxious to proclaim how much I find to admire in the style which I do not prefer, as I hope I have shown how much I admire Rubens, who, I might add, had I time to follow the analogy, seems to show striking affinities with the spirit of Classical architecture. I shall go at once to the root of the matter, and endeavour to show how much stronger is the position of Gothic than of Classical if the practical test of construction be applied. In fact, I dare assert that with our active civilisation the Classical method at once finds itself put upon the defensive. There is another train of thought, partaking of association and sentiment, which is often and strongly urged on behalf of Gothic as the Christian style and as the national style. Conscious as I am of the strength of this argument, I am willing on the present occasion to forego it, and trust to more purely architectonic, and therefore artistic considerations; I shall tie up that hand, and with the other make a good one-handed fight for the style of my predilection.

Classical art in its most consummate beauty is found at a very early date in its history—namely, in the art of Free Greece. This is a truth which is so little contested as to have become a truism. But what is that architecture of Free Greece which is the *ne plus ultra* of Classical art? It is the art of the beam and the post, the art to which the arch is an absolute stranger. It is trabeation, not arcuation. The Romans, heirs of the Classical art of Greece, found out the arch, a practical gain which would be feebly described as invaluable, and through the long centuries of their domination they laboured to marry the arch to the ornamentation which they had received from trabeated art. It was a gallant attempt, marked by conspicuous ability, and developing much material force—material in excess of artistic force. It was working as Romans for a Roman object. But the verdict of cultured posterity is that for pure beauty the architecture of Greece, with the drawback of ignorance of the arch, is superior to the more grand efforts of arcuated Rome. In this fight of centuries the arch at last prevailed, and declared its right to dominate the composition—the round arch in Romanesque, the pointed arch in Gothic. It was a strangely-prolonged contest, but not devoid of prophetic forecasts, which men were, of course, unable then to decipher, and over which even with the light of retrospection flashed upon them they are very dim of sight.

It is a commonplace of rhetoricians, when they desire to point a sentence about Roman grandeur, to appeal to the aqueducts; but these aqueducts—long lines of arches—are just the buildings in which all classical elements and classical feeling are reduced to a minimum, and the victorious arch asserts itself as the guiding principle and the leading form. Look also at the Coliseum. The details of the pilasters, no doubt, are Classical; but the grand idea is one of which the cardinal feeling is the play with free arch. Those Classical details may forbid us from calling the Coliseum Romanesque. But if Greek architecture is Classical in its purest and truest form, what is the architecture of the Coliseum? The critic who can complacently point with one hand to the Parthenon and to the Coliseum with the other, and exclaim that he takes his stand upon Classical because it produced the Parthenon and the Coliseum, is a juggler who throws dust in our eyes by substituting words for ideas. The art principles of the two buildings are not different. They are hostile. The plausible objection of a few years back, that if things were really so the world never would have seen the resuscitation of Classical, may now well be left to the rejoinder that in that case the present age would never have been concerned with a Gothic revival.

Grecian architecture, with all its beauty of form within its limited sphere, is impossible now because, with all its refinement, it is barbarous in construction from the ignorance of the arch; while Roman architecture is not the architecture of Greece developed and made possible by the introduction of the arch, but the long conflict—a conflict of giants who needed centuries to adjust the fortunes of their fight—between the legacy of Greece and the inconsistent, invading, and ultimately victorious arch.

But this is not the only reason why the present practice of Classical architecture spells weakness. The architecture which is really strong creates the plan first, for the building is for man, and not man for the building, and then it clothes upon that building with all needful forms of beauty, generally the more beautiful because dictated by practical convenience. Such, speaking generally, is the Gothic method. With the Classical architect all must bow to pedantic laws of symmetry, and the most able building is not the one in which a varied and picturesque outside is the visible sign of a carefully-planned and convenient inside, but one



in which the conjuror has most craftily masked inconvenient wants by ostensible shams. That noble pile St. Paul's Cathedral is, I am sorry to say, a signal instance of this artistic weakness, for the whole of that attic storey which composes the upper half of the external elevation is a blank wall, screening a construction directly borrowed from Gothic cathedrals, in which it would have been made a delight to the eye by aerial flying buttresses and graceful clerestory. Do not smaller buildings also teem with blank windows, inserted to match the real lights, and with windows cut athwart by floors, where the working storeys and the storeys of pretence refuse to correspond? Time would fail me to catalogue all the clumsy contrivances which are necessities in Classical composition, and which, except by extreme blundering, can never occur in Gothic. Yet Gothic, when the need requires, or when no counter need forbids, can be as rigidly symmetrical as the rival style. The difference is that Gothic is the master, and Classical the slave of symmetry. Now I may have to prove that the strength of art in its architectural aspect is to be found in that arcuated method of which Gothic is the most perfect expression, and its weakness in that Classical which is either trabeated, and therefore wholly inadequate for an actual civilisation, or else striving to be arcuated, and therefore in rebellion against its trabeated first principles. The wide question of the comparison between details refuses to be dismissed in a few sentences, so I leave it altogether untouched.

The test of strength or of weakness is not a bad proof to which we may put the merits of that style which has sprung into so much fashionable favour under the name, alike abhorrent to geography and to chronology, of Queen Anne, but which we may very fairly consider as a development of the Dutch Renaissance. If I were to regard the phenomenon with the eyes of a Gothic partisan my feelings would be those of unmeasured exultation, for the enthronement of so-called Queen Anne is the absolute surrender of the Classical school with all its dogmas. But is it the advent of a variation of Gothic which has reached us clothed in all the strength of its style, or has it during the process of change needful to legitimate its *alias* taken to itself elements of weakness which may help to point an example?

The Queen Anne style, falsely so-called, lays claim to sharing in the strength of Gothic, by its honest display of the main features of the building, such as the visible gables against which the roof-tree abuts, the doors and the windows where they are wanted, and not where self-impressed symmetry compels. The red brick which it habitually employs is practical and rich in colour; but it exchanges strength for weakness in the details which have sprung into being through an unnecessary longing after contorted forms, such as extravagant gables and strange varieties of windows and window-settings.

The strength you will see is intrinsically greater than the weakness, for one deals with the structure and the other with the accessories; but the weakness is obtrusive, and therefore tells far more to the disadvantage of the structure than its constructive value can succeed in counteracting. Yet a Queen Anne building stripped becomes a Gothic skeleton, while a modern Classical building stripped is left in the shameful nudity of having no right to claim participation in any style whatever.

There is a palpable reason, on which I shall insist very bluntly, for the architects of our generation being even more careful than their predecessors in insisting upon a rigid observance of the double moralities of architectural art, the morality of construction, and the morality of composition. The civil engineers, a noble profession within its own limits, have come into the field as fierce competitors. The relations of architect and of engineer is a wide and difficult question, and one which it is absolutely impossible for me to touch in the few minutes still at my disposal. But I must say that if our architects desire to hold their righteous own against the competition of the engineers, they must buckle to with all their might to master every detail of construction, even in portions of the building which never can be exposed to view, to master thoroughly the value as to strength and durability of all materials, to be familiar with all the laws of thrust and resistance, and to wield with an unerring judgment all the principles of sanitary science. The engineers, on the other hand, if they go afield where architects used to be credited with an honourable monopoly, must condescend to those principles of composition, of dignity in masses, of grace in details, which are the features which make a building delightful to an unscientific eye. The Thames Embankment is a gigantic and magnificent work, but would it have been worse if the artist's hand had been more visible in the details, and particularly in the parapet?

Talking in this connection, I must say that in my opinion a more severe blow was dealt to the credit of Gothic architects by the discovery that, with all the pains which the chief of Gothic artists had taken to prove how gracefully he could dance in the fetters of that alien style which official prejudice had forced upon him, he has yet shown himself so strangely unappreciative of the responsibility which rests on every architect to master, and so bestow his personal care upon the sanitation of his building, than by the apparent readiness with which he ever assumed those fetters; for an ill-drained building produced by an able man must be weak, lamentably weak, in the trappings of whatever style it

may be garnished. It is in fact, as far as he can make it so, the proclamation that true art is not inseparable from true utility, that its influence may fail at the moment when life and death are at stake, in the refusal to make its presence known where it cannot court the passing applause of men, for sewers are generally unknown, and where they are known, they are in their nature noisome. Therefore, the architect who works for truth and not for applause, is bound to see that he does not purchase an outside artistic triumph, by playing with those issues of disease and death which follow on the neglect of nature's sanitary laws. Here you see is a fresh test of weakness in art.

I have, as you will observe, endeavoured to exhibit the strength and the weakness of art in strongly contrasted and very different aspects, the aspect namely of painting and that of architecture, and I have made little attempt to connect the two presentments of my subject. The mutual dependence of arts upon arts as they make up the grand singular art, would require a volume not an essay to discuss, and so I thought the immensity of the subject would be most vividly brought before your eyes by taking the connection for granted, and exhibiting isolated examples, although my treatment of the subject has led me from Fra Angelico to the drainage of the public offices. You may now, however, reasonably ask me whether I esteem it easier to make for strength, and eschew weakness in such a form of art as painting, where the difficulties are mainly moral, or in such as architecture, where they are also material. I am afraid my answer might be a rather ambiguous one, for I cannot get more near to a definite conclusion than by saying that it greatly depends on the temperament of the artist. Just as in the moral and intellectual character one man's strength is another man's weakness, so it is in the artistic life.

It is now time to draw to a close, and to thank you for your patient attention. I have been much guided in my choice of subject by reflecting that I am addressing not an art congress, but the art department of a Social Science Congress. Social science, as I read the term, is the science of social life, that science which, not in opposition to revelation, but as its handmaid and representative, labours to build up the human family in order, peace, and prosperity as an elect and noble commonwealth. So I asked myself if I could find a point of contact between social science and art, and I trust that I have found it in the strength and the weakness of art.

#### ECONOMIC DWELLINGS.

THE work of the Edinburgh Co-operative Company was described by Mr. H. G. Reid, in a paper on "Economic Dwellings for the People," which was read at the Social Science Congress. The author said that the capital of the society was at first fixed at 10,000*l.*, in 1*l.* shares, the object being to build with the view of accommodating such persons as were desirous of becoming owners of their dwellings. The entire capital was soon realised, and houses constructed in two storeys, each family having a separate entrance—a new departure in Edinburgh. A member of the society might become possessed of a substantial and commodious dwelling-house, costing from 120*l.* to 130*l.*, and worth in the open market from 160*l.* to 180*l.*, for an actual immediate outlay beyond an annual equivalent to ordinary rent of from 20*l.* to 30*l.* The society is now about to construct suburban dwellings. The net cost of these has not been ascertained, but they will be redeemable over a period of twenty-one years by monthly payments only a fraction higher than the rent generally paid for such houses. The houses built or arranged for number about 2,000, and the value of the work done, and about to be done, exceeds 400,000*l.* The capital, which was gradually increased, has yielded from 8 to 10 per cent. per annum. During the past fifteen years efforts of a like character have been made in Aberdeen, Glasgow, Dundee, and other Scotch towns; and in Liverpool, London, and some other great centres of population in England. It is not said that the experiment, admirable as it is, evolves any panacea for the permanent advancement of the British labourer. Yet it embodies a principle, the adoption of which touches, with life-giving effect, the roots of his moral being, domestic happiness, and material welfare.

#### BERLIN STREET PAVING.

A NEW form of paving has been in use in Berlin since last year, which seems to offer some advantages over wood. Layers of bricks are put down, from four to six inches in length, and impregnated with asphalt. After a short period they lose any air and water that they may contain, and absorb from 15 to 20 per cent. of the bituminous matter, becoming remarkably elastic and capable of resisting pressure and damp. The traffic in the Berlin main thoroughfares is of a heavy character, and it has been found that the new paving lasts much longer than any of the other systems, added to which it offers a sure foothold to horses. Occasionally it is found that after three months' wear some of the bricks crumble into dust; but this is believed to arise from a faulty impregnation with the asphalt, and not to any real defect in the system.



## NOTES AND COMMENTS.

THE Chinese appear to make use of metals to a larger extent than formerly. Foreign metals enjoy great popularity, as they are cheaper, better, and more easily worked. Many articles formerly made of wood are now made of iron, tin, or wire. The workmanship is often rough, and capable of great improvement; but the articles so made are found to be nearly as cheap, and much more durable, than the same in wood. Iron wire is used for frames for lanterns, stems of artificial flowers, &c., as well as for rough needles. It is found that iron bars are convenient for holding together the stones used in constructing quays and landing-places. An inferior tin, consisting of three parts tin with seven of lead, is employed for boxes and lamps. China possesses great stores of various kinds of metals awaiting development; until they are utilised the foreign import is likely to continue and to increase. It may also be stated that window-glass is no longer a rarity, and it is expected that the Chinese will before long attempt to manufacture plate-glass. They now make mirrors by silvering foreign glass and fixing the pieces in wooden frames. One shop turns out from seventy to one hundred glasses a day.

SOME notion of the quantity of Japanese fans used in Europe may be obtained from the official returns. During last year Hiôgo exported 2,647,966 fans; Osaka, 166,645 fans; and Kanagawa, 1,919,840 fans, or nearly four millions in all. There were 132,110 umbrellas and 16,299 screens exported from two of the ports, and the figures do not represent the entire quantity sent abroad. The exports of bronze, furniture, and porcelain are also remarkable. Looking at the extent of the trade, it is not surprising that a Japanese company is constructing an iron pier at Hiôgo, which is 450 feet long, at a cost of 100,000 dols., and four warehouses as bonding stores, each measuring 102 feet by 42 feet.

THE paper by Mr. F. SIEMENS, which was read at the meeting of the Iron and Steel Institute, on Wednesday, indicates a revolution in heating. It referred specially to the Regenerative Gas Furnace, but it may be applicable to other forms of furnaces. Hitherto the rule has been to make the space to be heated as small as possible, in order that the flame might be brought into contact with the inside lining of the furnace and the material to be operated upon. Mr. SIEMENS now believes that the most effectual way is only to allow the flame to radiate upon the material to be heated or melted, and to keep it from actual contact. The results obtained in practice show that there can be no doubt that almost all heating apparatus used in the arts, in which direct contact of flame with the substances treated is not necessary for chemical reasons, will be materially improved by the application to them of the principle of transmitting the heat of flame by radiation only, while the heat of the completely burnt products of combustion is better utilised by contact. Complete combustion of the fuel is insured by this method of heating, and it will therefore entirely abolish the smoke nuisance. Smoke is never formed when combustion is complete, being always caused by flame coming into contact with solid bodies, the process of combustion being thereby checked. This is, for instance, the reason why brick-kilns generally smoke so abominably, for in them scarcely developed flame is forced to impinge immediately on cold bricks, and can therefore only act in a very incomplete and uneconomical way. To work well, a brick or pottery kiln should be so built that the flame can burn itself out in a free space before being brought into contact with the bricks or pottery.

THE Commissioners of Sewers for the City have decided to make arrangements to ventilate sewers by carrying pipes above the houses. It should be known that the plan is not universally approved. In giving evidence before a Select Committee of the House of Commons, the inspector who has charge of the police arrangements asserted that since that plan of ventilation had been adopted in Westminster the atmosphere became worse. "The officers, the superintendents, the inspectors, and myself have," he said, "an opinion that the ventilation of the sewers by those pipes which run up the sides of the houses contributes very materially to the air being so impregnated with gas from the sewers." This statement was brought under the notice of Sir J. W. BAZALGETTE, the engineer of the Metropolitan Board of Works, and he agreed that in many cases the

plan is a very dangerous one, as it is much worse to have the mouth of a ventilator near bedroom windows or chimneys than to have the sewer gas diffused in the street. Sir JOSEPH has had more experience than any living engineer in examining devices for the ventilation of sewers, and the conclusion he has arrived at is that the best thing to be done is to take care that the sewers are well cleansed with a good stream of water running through them, so that all decaying matter should be carried away rapidly. There are opinions which can be taken to support the Commissioners' plan, but even the most cautious chemists must admit that sewer gas can readily enter houses under the conditions proposed.

A GREAT many letters have appeared lately in the *Times* on the subject of building societies. For a long time there has been much doubt about their true condition. It is possible to produce balance-sheets which are reassuring; but to what extent do they represent the affairs of the societies? The suggestion commonly made is to ask an independent actuary to investigate the account books. His employment would in many cases be a service, but in the most essential matter he would be useless. The difficulties of the societies mainly arise from advancing loans which are in excess of the value of the buildings which become security. The men who generally act as valuers are pushing fellows who have helped to get up the societies in order that they may be appointed surveyors. It is rare to find a valuer attached to a society who before its constitution had gained any position in that line. He is more likely to have been a furniture dealer, an auctioneer in a small way, or a collector of rents, than a surveyor. It is difficult to estimate the damage which those men have done; but the investigation, if undertaken, must be the work of an architect or a surveyor rather than of an actuary. If a few experiments were made with societies taken haphazard, we are confident that enough would be discovered to make a Royal Commission a necessity.

GENERAL PITT-RIVERS, the Inspector of Ancient Monuments, does not believe that the Pen Pits in Winklebury are the remains of "the largest ancient British city of the realm." The pits have been the subject of much controversy, but a careful examination of them appears to prove that they are only primitive quarries. The Britons, if such they were, who worked at Winklebury, being, according to General PITT-RIVERS, very imperfect quarrymen, as may be judged from their rude stone monuments, and being unable, with the tools at their disposal, to grapple with the solid rock, they skimmed along the surface of the layer of stone, removing such loose fragments as could be easily detached and which served for the formation of querns. Portions of defective querns were found mixed with the rubbish of the pits. It is also remarkable that no remains of pottery have been found in the excavations, and there is no record of any having been met with in past years. It would thus seem that we are far from having in the Pen Pits a part of a connected system of prehistoric fortification.

THE bars and gates which are allowed to exist on many of the great estates in London seem to be a relic of feudalism. It has been a cause for wonder that the Metropolitan Board of Works have not obtained powers to remove those impediments to free communication in the metropolis; but at one of the last meetings it was decided, by a majority of two, to take no steps in the matter at present. A number of delegates from vestries and district boards met at the St. Pancras Vestry Hall on Wednesday, when the following resolution was proposed:—"That this conference, having heard read the report of the Parliamentary and General Purposes Committee of the Vestry of St. Pancras and the proceedings of the Vestry thereon, hereby concur in the views expressed thereby, and do urge upon the Metropolitan Board of Works the desirability of their reconsidering their decision of July 25 last, with a view to immediate steps being taken to promote a Bill in Parliament for the abolition of bars and gates across the public thoroughfares, as a matter of metropolitan and public importance and necessity." The resolution was carried unanimously, as was also a second resolution requesting each vestry and district board of the metropolis not only again to memorialise the Metropolitan Board, but to request their representatives to support their views in bringing the matter by a Bill before Parliament.









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DESIGN FOR ADMIRALTY

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BY MESSRS VERIT



pl 27 1884.



& WAR OFFICES

& HUNT.







## ILLUSTRATIONS.

DESIGN FOR THE ADMIRALTY AND WAR OFFICES.

WE publish three views, showing the design by Messrs. VERITY & HUNT, which was placed second in the late competition. It can be said that no design received more commendation from architects.

## POPULARISING OF ART.

THE special question considered on Monday in the Art Department of the Social Science Congress was, "How can a love and appreciation of art be best developed among the masses of the people?" The first paper was read by Mr. Walter Besant, the novelist. Premising that his remarks were based upon no other experience than that of East London, and must not be taken as applying to any other city, he said that until we had mastered the problem of finding steady work for all, with adequate wages and decent homes, we need not look for art in the lowest ranks. They had, therefore, to do not with the very poor, but with the respectable poor, who had leisure and possessed some education, and in respect of whom there was no reason at all why they should not, if they could only be got to desire it, become students in some of the branches of art. With respect to the agencies which were at work for art in the East End, there was first the Bethnal Green Museum, which, intended to be a great educational centre, had done nothing of the things for which it was founded. It was simply a dull and silent gallery. There was no teaching at all; people were expected to teach themselves. One or two institutes, the parish organisations, and the chapels with their systems of meetings, lectures, &c., were also at work, but as yet the people did not show the least enthusiasm for art and were content to be amused. The exhibitions, concerts, recitations, and the like did not stimulate them to draw, paint, carve, play an instrument, sing, recite, or act for themselves. But observe, that directly they formed clubs of their own, although they might develop many reprehensible tendencies, especially that of gambling, they did at once begin to act, sing, recite, and dance for themselves. What we wanted them to do, then, was to begin for themselves, or to fall in willingly with those who began for them the pursuit of art in its more difficult and higher branches. We wished that every boy and girl should learn something, and it mattered little whether we made him draw, design, paint, decorate, carve, work in brass or leather. Imagine a time when in every family of boys and girls one should be a musician, and another a carver of wood, and a third a painter; when every home should be full of artistic and beautiful things, and the present ugliness be only remembered as a kind of bad dream. This might appear to some impossible, but it was on the other hand very possible, and sure to come in an immediate future. What he proposed was the establishment of a society for the encouragement of art in all its branches, especially the minor arts, because those could be quickly perceived to have a practical value of their own. There would be local committees, local museums, schools, exhibitions, &c., in which all the teaching work should be done for nothing, and there should be at all events at first no fees. This was not a novel or an impossible proposition. An immense amount of work was actually being done by volunteers; what was done for religion and philanthropy would certainly be done also for art. But when the society had been started by voluntary effort, it must, if it was to succeed, be carried on by the people themselves, and they would have to be paid, but at workmen's wages rate, for teaching in the schools.

A second paper was read by the Rev. W. Tuckwell, who urged that love of art was desired for the wage-earning working class on philanthropic as well as on artistic grounds. Their craving for home ornament and decoration was universal, but the supply was execrable. The most popular, the cheapest, and the loveliest of possible ornaments were flowers, hints for the wider cultivation of which were given. Cheap and graceful specimens of wall-paper, pictures, and ornaments were exhibited, the necessity of direct art teaching in Board schools was insisted on, and stress was laid on the value of music, in which direction again the schools must take the lead.

On the motion of Mr. T. C. Horsfall, seconded by Mr. P. H. Rathbone, it was resolved to recommend to the Council that the papers of Mr. Besant and Mr. Tuckwell, together with the paper read by Mr. Leland, be printed at a low price for general distribution.

Mr. Horsfall remarked that he should go back to Manchester with the intention of doing all he could to form in Manchester a branch of the association Mr. Besant and Mr. Leland proposed to found. He dwelt upon the importance of beginning art education at an early period of life. With regard to exhibitions, they should contain objects more nearly related to the ordinary life of the people than were the objects commonly lent by the South Kensington Museum. He would therefore move another resolution, viz., "That this section recommends the Council of the Association to inform the Science and Art Department that in the opinion of this section the

collections lent from the South Kensington Museum to municipal and other museums would be much more useful than they now are if they consisted largely of things not only excellent in respect of artistic quality, but also fit for the use of the English people."

Mr. P. H. Rathbone seconded the resolution.

Mr. Mark H. Judge wished to be allowed to move as a rider to the resolution a proposition of which he had given notice, having reference to the Sunday opening of museums.

Mr. A. C. Osler said that the question was really whether the national museums should be the means of developing a love of the beautiful for its own sake, or whether they should be maintained for purposes of utility only. The resolution did not seem to advocate the former, but seemed to want to make the museums the means of leading the fashion. If they were to show specimens of what was best in pottery, why should they not show what was best in dresses and bonnets? If this kind of thing were once started the museums would come into collision with the shops, and the door would be opened to no end of jobbery. The resolution was one of considerable importance, and he protested against its being passed, especially in that hurried manner. He certainly hoped that it would not be passed in Birmingham.

Mr. Wilson spoke of the importance of the education of the eye in colour as well as in form. With regard to decoration one-third of the people of London changed their residences every year, and it was not likely that a working man would spend his time painting a dado on the wall of a cottage which he would probably leave in six months. Besides, the landlord would be down upon him for damaging the property. Landlords objected, too, to flower-boxes because they made the brickwork damp.

Mr. E. R. Taylor said that the lines the South Kensington authorities went upon were to choose what was beautiful in form or colour, whether it had decorated the palace of a king or the cottage of a working-man.

The Chairman having objected to any discussion on the papers generally, Mr. Bartlett urged that the resolution was out of order, and ought to be put aside till they had discussed the papers.

After some conversation the resolution was withdrawn.

## NATIONAL EDUCATION IN ART.

THE special question set down for discussion at the first day's meeting of the art section of the Social Science Congress at Birmingham was, "Ought elementary instruction in drawing to be made an essential part of the national education?"

Mr. J. P. Seddon said the subject involved three points for consideration—1st, whether it was possible; 2nd, whether it was desirable; and 3rd, if possible and desirable, what should be the character of the instruction to be given. To learn to draw was easier than to learn to write, and hence it was possible to teach drawing to every person of average ability. The desirability of doing so needed to be regarded both from the individual and public point of view, especially as the latter would include its cost to the nation. Every individual would certainly gain from being thus made more efficient, and therefore more valuable for his work in the world, whatever that might be; and would be also endowed with means for self-amusement and gratification. From the point of view of the public, instruction in drawing was desirable to render its social members intelligible one to the other; for the powers of description of the tongue, unaided by those of the hand, were limited. Drawing, however, by compelling observation, and consequent habits of accuracy, was in reality a valuable system of education in itself. But the strongest reason for making it an essential part of national education was that it would form a material aid to technical instruction. As to the character of this elementary instruction in drawing, unfortunately throughout the western world it was of a wrong nature, and the damage this had already done was incalculable, as it had given an erroneous bias to art generally. By a singular misnomer this had been called "freehand drawing," whereas it was in reality rather cramped drawing. It consisted in setting the pupils not to draw from objects directly, but to copy other drawings, by which means the attention and powers of observation had been concentrated upon lines, and shading, and mannerisms, and details, instead of being shown how to grasp the whole of a subject first, with its essential features and construction. The elementary instruction should be both right in character and thorough. What is wanted is simply line drawing—that is, correct draughtsmanship with the pencil or point, without the stump or the brush, without shading or colour, and this gained by drawing from objects, and not by copying the drawing of others. When pupils have been set to try their hands at model drawing from objects, the vice originally engendered by the "freehand" studies has followed them. How to do it was once exemplified in the North London School of Art, Camden Town. The pupils copied from objects instead of from drawings. Give a student a single object to draw, such as a leaf, the construction of which is obvious, or a cast of one as more convenient, his mind grasps at once the problem that has been put to him. If a drawing of a leaf be given him instead, he looks merely to the lines. If elaborate



"freehand" studies be closely examined, the outlines of the leafage will be found to be distorted more or less. Light, shade, and colour should, in all cases, be left until after the acquisition of accurate power of true draughtsmanship. What was wanted by the nation was, not that every individual should be an indifferent "impressionist," able to give a confused effect of a thing, in slovenly light and shade, or colour, in order to hide inaccurate drawing (which, it must be owned, seemed to be the result of the occidental training in art schools, some few only of the students rising from the general low level), but that every one should be able to draw in clear lines the essence of the objects given, in the manner, for instance, in which the Japanese, as a nation, seemed able to do. The human figure was the most useful, as well as the highest, aim for draughtsmen; but it would be simply hopeless to include it at all in a scheme for elementary instruction, unless it were approached otherwise than at present. Yet carvers, glass-painters, and many others needed it. They required, however, its proportions and its poses, and not its surface; and instead of furnishing up a few noses and eyes, or even whole figures with a stump, they wanted to have the opportunity for sketching correctly a much larger number of figures, on some such system as we know to have been adopted in the Middle Ages. This is to be gained by sketching the human figure in numerous and various attitudes, and not by laborious imitation of the light and shade on its surface. Art has to deal with the visible, and, if the ordinary public can be brought to observe that, and to draw it in a clear and definite manner, all will have been accomplished that could come within the scope of that elementary instruction in drawing which could be considered as an essential part of national education, and as such chargeable at all on the national purse. It was useless to attempt to teach students to draw more than they saw, which it was stated was the case abroad. The anatomy of objects, it was true, regulated their structure; but, at any rate with elementary instruction, it would suffice if this was limited to training the power of the eye to observe, and of the hand to depict what was observable.

Mr. Charles G. Leland said that all the minor or decorative arts were, strangely enough, easy for children of even tender years. In South Germany and the Tyrol infants of six years of age carved wood so well that their work had a market value. In Spain art-pottery of a very high standard was made by very young boys and girls, and in Italy the same small artists did as well in mosaic-setting, fancy basket-making, and other arts. In Egypt the young of both sexes executed embroidery, inlaying, *repoussé*, and even jewellery, with a degree of skill which in Europe no one expects save from grown-up and highly-trained artists. He made an experiment with two classes of a hundred pupils each in Philadelphia. The industrial branches actually taught with full success were embroidery, painting (chiefly in monochrome, in water-colour and oil), setting mosaics, modelling in clay with colour and glaze for firing, stamped sheet leather work for furniture, sheet metal work or *repoussé*, wood-carving, and easy carpenter and cabinet-making work, with turning, fret-sawing, and inlaying. Soon he realised that it was necessary that every pupil must first learn how to draw, and to determine what kind of drawing this should be. The drawing should serve as a correct beginning for every other kind of art. If a child begins by learning design and drawing simultaneously, and gets so far as to be able to execute a correct pattern fit to be put in hand to work out, that child can, after a little manual practice, master all decorative arts. The result of hundreds of experiments, with unwearied study of the character and capacity of every child, convinced him that all are capable of learning original design, if it be properly taught. The result is an increased quickness of intellectual perception or intelligence, so that literary studies are also more easily mastered. The pupils, when merely half taught, were eagerly taken into foundries, carpet factories, &c., as paid learners. Even farm labourers, colliers, sailors, and all working-men can be aided. All occupations have a cultured side, and we must awaken attention and quickness of perception by a peculiar training of which drawing is a part. All hand-arts are only drawing developed in different forms. He began by teaching what is technically known as "the vine," in from 20 to 40 lessons. The pupil was taught, after the first lesson, to design, and not to merely copy. The use of compasses, rules, and curves was not only allowed, it was insisted on, as training the eyes to accuracy. Drawing, as generally taught, on the picture-making plan, is a mere accomplishment, not worth the extraordinary expenditure of time and money which it has occasioned. To answer the question, "How can you at little extra expense introduce not only design, but arts, into every village school in the country? Who will be the teachers?" he wrote for the Commissioner of Education in the United States a pamphlet, of which 60,000 have been given away. The result has been the introduction of drawing and its application to art in hundreds of schools and families. The pupil should be taught to design from the beginning. The learner should be told to design a vase, a frame, a fan, a book-cover, a pair of bellows, a cabinet or chair, but always something definite, and not fritter away time on abstract arabesques with no immediate aim. Much examination had convinced him that there are ten persons who can learn to draw well where there is one who can write a really good hand.

In England the Cottage Arts Association has now under way several scores of schools, but this is only a mere preparation. Drawing means something more than making lines on paper—it should also include the working out the drawing in some other material. Scientific design based on geometry, and involving the conventionalising of flowers, the rules of perspective, &c., is for elder pupils who have time. For a child of from eight to fourteen, who can only give one afternoon or evening in the week to drawing and its applications, these advanced methods are impossible. All over Europe and America there is a rapidly growing, deeply seated conviction that industrial art, manual labour, or the exercise of the constructive faculties should have a part in even elementary education. For this drawing must be taught. The question is, "What kind of drawing?" The reply is, "That which lies at the root of all design."

Mr. Rowland Hamilton said the due exercise of the eye, regarded merely as an organ, tends to its healthy development. Canon Routledge, inspector of schools, when the subject of colour-blindness was under discussion, wrote to the *Times* that he had never found a case of this defect in a child who had been properly trained in an infant school. The training implied would consist of lessons in "form and colour." Early training enables the hand to trace what the eye actually sees. Early training in drawing should be under the direction and influence of those who are profoundly imbued with the true knowledge of art. Everything that is bad and false in art should be inexorably excluded from the school; nor is all that is good in art suited for the purposes of instruction in its earliest stages. Infants want the simple phases of moving life depicted to them. Primary faculties themselves are only developed by degrees; delicate contrasts and harmonies are lost upon young children. Given a well-trained power of observation, and a hand with some ability in delineating that which is discerned, we have another "gateway of knowledge," another mode of expressing facts and of conveying useful information. In the late war the French not only suffered from the want of maps, but, from want of practice, few could make full use of them. The "graphic method" is coming largely into use in many recondite questions for the clear expression of numbers and quantities. The nature of the processes of simple arithmetic can be made apparent with very few units, whether of forms or of figures. Professor Clifford had it in his mind to write a geometry for the nursery and kindergarten. There are abundant indications that a course of training which will at all events tend to bring the population into some familiar contact with art will meet with an ample response.

A paper by Miss Sophia Beale, which was read by the President, pointed out that drawing has made little advance in ordinary schools of late years. Girls are still taught to paint before they can draw, and are allowed to fritter away their time in pencil drawings of ruins, &c., as of old; or "chalk" heads, or porcelain, faience, lustra, tapestry, and crystoleum painting, and other new-fangled nonsense. Art schools have done much for professional workers, but the amateur is as ignorant as ever. Art is a great deal talked about, but is little practised except in spoiling good house-paint by so-called decorations. Nor is sufficient time given to drawing at schools. Music being a showy accomplishment, has two hours a day spent on it—drawing only two hours a week; but the result is much the same. The one makes a girl a nuisance to all within hearing; the other enables her to sketch in a weak manner without any perspective. An art education should before all things cultivate and improve the taste, so as to make persons appreciate what is noble and good in art. This is done more in France than in England. If drawing were better taught this would not be. All children should learn it, as it is the only way to teach observation. But they should be made to draw common objects from nature, not senseless uninteresting curves. School-rooms should have photographs, prints, copies, casts, &c., of good works upon the walls, to educate the eye at odd times. As to mediums, *papier Ingres*, charcoal, and stumps are the best. No niggling should be allowed. Stability of purpose is much wanted in England. French girls work more steadily—even those "in society." Here they work one month, and then fritter away two or more. Real work in drawing should be done in school days, otherwise it becomes to other girls slavery. Scales and exercises are insisted on; why not serious drawing? Men and women amateurs are not wanted to be artists, but intelligent connoisseurs. This is what art education ought to do; and were it made a part of general education, instead of an "extra," it would do so, as teachers then would be independent, and school-mistresses would not be obliged to send home "pretty pictures"—daubs in water and oil-colours, and wretched "chalk" heads all out of drawing, in order to please parents and make them think they have their money's worth.

Dr. Heinemann expressed his belief that the English people had as great a natural faculty for art as any Continental nation.

Mr. E. R. Taylor advocated the teaching of drawing in infant schools so soon as children should be able to hold a pencil.

Mr. T. C. Horsfall said the training in our Board schools was so good and quick that the brightest children were turned out in large numbers about the age of twelve, and in the years which followed they often forgot what they had learned. Thus it was



that the duller children, who had to remain at school longer, reaped an advantage over their brighter companions. He thought there was a strong opinion growing up that we must have compulsory attendance at evening classes up to the age of fifteen or sixteen years. At these classes art must be taught, the brighter kind of education, such as music and drawing, being essential to the success of the education to be given.

Mr. P. H. Rathbone said that at the present time there was being produced a number of artists who were absolutely useless to the country, because they turned their attention simply to a certain class of work of art which was of less practical value.

In concluding the discussion, the President spoke in highly eulogistic terms of the papers which had been read. Mr. Hamilton was very strictly logical in establishing his view. Those persons who, from benevolent motives or worse feeling, went into art schools and were appalled by the series of models—the same everlasting busts—would be glad of the opinions expressed by the readers of the papers. The discussion had really been in effect a vigorous protest in favour of common sense, and of the employment of an appreciation of human nature in art studies.

## WORKMEN'S DWELLINGS IN LARGE TOWNS.

THE Health Department of the Social Science Congress were engaged on the 18th inst. in considering "What are the best means, legislative or other, of securing those improvements in the dwellings of the poor which are essential to the welfare of the community?"

A paper was contributed by Mr. John Hamer, honorary secretary to the Mansion House Committee, on "The Dwellings of the People." It was said that the question was a broad one, and affected the well-being of every member of the community, no matter what his or her station in life might be. The fact that improvements in the dwellings of the people were essential to the health of the nation lifted the question far above the region of class interests, and endowed it with national importance. If a healthy body was conducive to a sound mind, how much more more healthy dwellings to an intelligent commonwealth? It was from this standpoint that he discussed the question. All classes alike were lamentably in need of improvements in their habitations and surroundings. Amongst the "other" means for remedying the particular evils, the writer placed in the foremost rank associations of men and women whose object was, by personal visitation of and familiar intercourse with the masses, to arouse such feelings of sympathy, hope, and courage as should educate the people themselves to a proper degree of decency. This once done, the rest would follow as a matter of course. The building of better houses for the people, when undertaken and managed on commercial principles, is strongly to be commended, but the results in London have not, so far, been all that could be desired. We have got the houses, but we have not got the right class of people in them. The rents are too high for the labouring class. The machinery at present at work for enforcing the laws of sanitation is terribly deficient. For 4,000,000 people, living in 500,000 houses, the wealthy metropolis generously provides fifty medical officers of health, who do not average a couple of inspectors each to assist them. That is to say, each sanitary official has to look after the health of 26,000 persons. The Local Government Board issued a circular urging the district authorities to put in force the regulations as to houses let out in lodgings. Out of the thirty-nine governing bodies in London, how many have complied with this suggestion? Not half a dozen. The Royal Commission sent out blank forms asking their aid in the collection of statistics vital to the efficiency of their inquiry, and the responses have been practically *nil*. District surveyors when they bring an action against any one for infringing the Building Acts do so at the risk of having to pay the costs of the action out of their own pockets if they fail. Twenty-two thousand persons have been compelled to leave their insanitary homes under the powers of the Industrial Dwellings Act. Accommodation has been provided for 14,000 of these. Where meanwhile are the 8,000? Nuisances have to be sought out. The power to delay, postpone, and ultimately defeat by sheer procrastination, is one of the worst evils the would-be sanitary reformer has to contend with. The outbreak of infectious disease has to be watched, and the measures taken to prevent its spread. The sanitary authorities exist rather for the removal of nuisances than for the prevention of disease. With regard to disease produced, say, by infected milk, they can do nothing until disease has been produced by its consumption. After a site is covered, houses built, and inhabitants exposed to ill-health or lost their lives, London thinks it well to give to the sanitary authorities power to act. Prevention should be the base of all sanitary regulations. We should adapt our official machinery to our altered circumstances, and create a Ministry of Health and Education. The health of the people and the education of the people are so vital to the whole nation that their regulation should be a national, in other words a State, affair.

The Rev. H. Solly said that everything in the paper was worth attention as useful information or valuable suggestion, but he him-

self thought the great remedy was taking the people back from the towns to the country.

Dr. B. W. Foster said he was connected with an inquiry which was made in Birmingham in reference to the dwellings of the poor. The result of that inquiry was unsatisfactory to some people, because the authors of the report were unable to deal with any sensational disclosures or recommend any great radical changes. But he thought that result ought to be exceedingly satisfactory to the inhabitants, because it meant that the dwellings of the poor in Birmingham were in a very fairly satisfactory condition, that they were not very crowded, and it was discovered that little outside interference was necessary. Only twelve instances were found of whole families living in one room. He only wanted to contrast the results obtained in Birmingham with the cry which the miserable outcast of London presented to the country not long ago. If London had a corporation as active as the Birmingham Corporation, if it had the same cohesion in the administration of its municipal affairs, the terrible condition of things which existed in London would soon cease to be. He hoped that under the present Government, or under some other, a better condition of things would be brought about in the metropolis, and that London would cease to be a great blot on English civilisation. Dr. Foster recommended outside interference in the way of effecting cleanliness, until the people, by seeing the picture of cleanliness presented to them, would learn its worth and adopt the principles of cleanliness themselves, and so relieve the authorities of the necessity of outside interference. He warmly advocated the suggestion made by the writer of the paper as to a Minister of Health.

Mr. Shaw-Lefevre said if it was true, as stated, that in Birmingham the recent inquiry revealed the fact that there were only twelve cases where more than one family dwelt in a room, he could only say that it was a condition of things very different to that of many other large towns. In London there were thousands of such cases, but the case of London, in a sanitary point of view, was more difficult than that of any other town. That was due to many causes. The value of property in the centre of London rendered it almost impossible for workpeople to obtain houses at a cheap rate near their work. There were two kinds of legislation affecting the dwellings of the poor—one, the Torrens Act, which dealt with individual cases; and the other, Sir R. Cross's Act, which dealt with collections of houses. The Torrens Act could not be improved for the purposes for which it was intended; but both Acts required intelligent local action. If we could get a good authority to carry out these Acts in various localities, we should to a great extent solve the difficulty. The Cross Act was more difficult to deal with, and he had himself carried an amending Act in 1882. The original Act enabled local authorities to destroy whole districts of bad houses. In many cases this was the only possible method of dealing with them, but on the condition that we built artisans' dwellings on the sites. The difficulty in such cases was the enormous cost of the land so taken, and he was surprised that the Metropolitan Board of Works had done so much. Many of the houses had been removed at a cost of 500*l.* for each family. The Act of 1882 provided that artisans' dwellings need only be built upon one-half of the site, leaving the other to be used for commercial purposes. It had been shown by investigation that the people who were turned out were not living in the houses because they were near their work, but that in many cases they had to traverse the metropolis to go to their work, which was sometimes in the suburbs. Under those circumstances there did not seem to be any particular necessity for the local authority to build the houses on the same site when land could be procured elsewhere, and perhaps nearer the work of some, at a cheaper rate. It might be questioned whether the Act might not be further amended in this respect, so as to permit freedom of action on the part of the local authority. A serious consideration was that of compensation to the owner of the premises. It was the intention of Sir R. Cross's Act that they should not be compensated to their full value, and no doubt he believed that that would reduce the cost of the site, but the Act had fallen into the hands of technical men, who seemed to be very much impressed with the value of land, and conservative ideas of that kind were to be found in the minds of the arbitrators who dealt with the subject. The consequence was that owners obtained compensation to amounts which to him appeared preposterous. The question was whether owners who had allowed property to go into such a bad state and to become a nuisance to the neighbourhood ought to be compensated to the full extent in the ordinary manner. The houses were bought and sold for letting in tenements, and when the lease had only a few years to run the owner would do no repairs, thinking it was not worth while, as at the end of the lease the site would be taken. Was such an owner to be compensated in the ordinary way, or were we to take into consideration the fact that there was a moral obligation on his part not to turn out the people who had been living on his premises from time immemorial? If they were taken into account, as he thought they ought to be, the compensation to be paid ought to be very much reduced. Then came the question of compensating the middlemen. Many of these houses were held by men who took them on a lease at a low rent, let them to poor families, and in that way made a large income. The present system of compensation to such men was that the difference between the



rent they paid and the income they received was taken and capitalised, and the result was another enormous sum for compensation. Before the Royal Commission he had ventured to contend that such people ought to be compensated on the basis that they were business men. They devoted their whole time to this as a business, and they ought to be compensated in the same way as any other persons whose business premises were taken from them. If such a principle were to be adopted it would work out a great difference in the sum of the compensation. They might also reduce the cost by reducing the rate of interest charged by the State. It was Sir R. Cross's intention that the State should advance money at low interest for the purpose of purchasing the sites, but an Act of 1879 raised the rates of interest. It might be wise to return to Sir R. Cross's original intention, and by reducing the rate of interest give assistance to the local authorities in that way. The continuance of the bad state of things in the worst parts of London was not due to the mismanagement of the local authorities, but to the state of the law, which did not provide methods for preventing owners misusing their property. In that view, he believed it to be a legitimate object for the State to contribute towards clearing such sites, and that could be done in no better way than by advancing money at low rates of interest. These were points in which the Acts might be amended to enable local authorities to put them in force. He was strongly averse to the local authorities building for themselves; that was better left to private enterprise. Nothing but mischief would result from the local authorities providing houses for the poor. What they had to do was to put a stop to the mischief which already existed.

Professor Gairdner said that the action taken in Glasgow had been largely beneficial. The population which had been displaced was the better for it. He did not see any principle by which the local authority could step in and become landlords without seriously interfering with the law of supply and demand. The principle upon which the work ought to be done was that of upholding the good and condemning the bad; so that if a man built a house he would be certain that if it did not satisfy the authorities it would have to come down. If that rule were made and rigidly adhered to it would prevent the monstrous evils which had occurred in many great towns.

Mr. H. H. Collins said he had successfully advised manufacturers to take their works into the country, and, of course, the workpeople must follow the works. Thus land in towns might be left to realise its commercial value.

Mr. Hurst said that rural labourers were driven out of England by being compelled to live so far from their work. Good cottages, he found, would attach them to the soil.

## THE RESTORATION OF WESTMINSTER ABBEY.

WHAT will certainly be the most extensive restoration that the exterior of Westminster Abbey has undergone during the long course of its history has, says the *Standard*, now fairly commenced, and for several years to come workmen will be engaged in operations which, when completed, will literally have put a new face upon the greater portion of the fabric. It is not proposed merely to reface the exterior and to reproduce every detail exactly as it now exists. The restoration will be far more complete than this, inasmuch as the plans include the removal of many excrescences and disfigurements which the bad taste and ignorance of successive architects, chiefly during the seventeenth and eighteenth centuries, led them to engraft on the original. The object is, in fact, to restore the Abbey to the condition in which it stood when it was in charge of such masters of Gothic architecture as Abbot Islip, and before the debased style of Gothic art came into vogue.

Only those who are thoroughly familiar with the history of the Abbey can have any idea of the extent to which the outer fabric has from time to time been renewed. In the popular imagination the building is looked upon as a whole, equally ancient in all its parts, but as a matter of fact there are centuries of difference between the dates at which various portions were erected. Few are aware, for instance, that the splendid exterior of Henry VII.'s Chapel is an entire restoration completed as recently as 1822, and, fortunately, needing no renovation now, though there are marks of decay which seem to indicate that this part of the church will also again have to be dealt with in another half-century or so. Henry VII.'s Chapel is not included in the scheme of restoration submitted to the Dean and Chapter by Mr. Pearson, R.A., the architect to the Abbey. Neither is it proposed to touch the cloisters, for although the outer skin of the stone of which they are built appears to be in a very decayed condition, and crumbles away at the touch, the roof, which has only its own weight to bear, will last for a long time yet, being of course, comparatively sheltered from the effect of the weather.

The work of erecting the scaffolding from the top to the bottom of the north transept is being rapidly accomplished, this being the first section of the Abbey with which it is intended to deal. After this part has been restored the work will be continued on the south side, and the east and west points will subse-

quently be taken in hand. Various experiments have been made with the object of determining what is the most suitable material for the work, and it has finally been decided to use the hard grey stone, procured from the Chilmark quarries in Wiltshire, which possesses special properties of resistance to the muriatic and other deleterious acids with which the London atmosphere is charged. Until the work has been in progress for some time it will be impossible to determine the precise extent to which the restoration of the fabric will have to be carried; but as we have indicated, it must necessarily be of a most extensive, and certainly will be of a very costly nature, the funds, it is understood, being provided by arrangement between the Government and the Ecclesiastical Commissioners. A staff of forty or fifty masons will be engaged, and their operations will in all probability extend, at the least, over a period of about five years, although the work will be pushed on as speedily as possible under the superintendence of Mr. Pearson, who has a most efficient and zealous coadjutor in the person of Mr. T. Wright, the Clerk of the Works to the Dean and Chapter.

## ART AND POLITICAL ECONOMY.

ONE of the voluntary papers read at the Social Science Congress was by Mr. P. H. Rathbone, upon "The Place of Art in the Political Economy of a Nation." The main object of art, he explained, was to do whatever we had to do so as to be of most use and give most pleasure. For many years we had devoted ourselves with considerable success to being the cheap-jacks of the world, for should America repeal her insane protection laws, our manufacturing supremacy, as far as cheapness was concerned, would probably become a thing of the past. It behoved us, therefore, to manufacture the best and most tasteful fabrics rather than the cheapest. The general world smiled when, a few years ago, sound art was introduced in wall-papers; but the result had been that we were exporting good instead of cheap wall-papers. Mr. Rathbone pointed out the effect of the Exhibition of 1851 in stimulating the potters to the study of art; and the example of Birmingham, and especially the work of Messrs. Elkington, served to show the pecuniary success attending the development of art. As it was, for the want of art education, much highly-paid artisans' work fell into the hands of foreigners. He could not altogether absolve trade societies from blame in this matter, as the objection to having wages regulated in proportion to the skill and industry displayed, which they had occasionally evinced, was most immoral and demoralising. It was not, however, only necessary that our workmen should be artistically trained; they should live in an artistic atmosphere, among a public ready and able to appreciate and criticise their works. Through a more thorough artistic education we should enable our handicraftsmen to turn from an overstocked occupation to one understocked, and thus render their intelligence and labour more mobile and fluid. At the present moment we were face to face with a very perplexing paradox. With the main necessities of life—food, clothing, and shelter—over plentiful and cheap, the best-informed employers were looking forward to a period of more than ordinary distress among industrious workmen during the coming winter. There was, he thought, a permanent cause for this. These main necessities could now be supplied by working, say, seven hours instead of ten hours a day, as formerly. This would be all well if the workmen all worked seven hours per day; but, as a matter of fact, seven-tenths worked ten hours a day, and three-tenths looked on with idle hands. The remedy was that the three-tenths unemployed should produce the means of making the lives of the other workmen brighter, happier, and more varied than at present. It required time, of course, to cultivate a love of art, but it might be done by art galleries and museums, by concerts and theatres.

The President expressed the great interest with which he had listened to the reading of the papers, and remarked that Mr. Rathbone had shown by arguments tersely and convincingly put, what a delicate relation there was between art and the economic laws of the universe. The ideas contained in the paper would push themselves to the front as the only means, if carried out, of maintaining the present footing of this country amongst other nations.

## GILCRUX CHURCH.

AN application was made lately to the Chancellor of the Diocese of Carlisle for a faculty to make the following alterations among others in Gilcrux Church:—To take down a portion of the north wall at the east end of the church and to build one bay of the north aisle with a temporary wall across the west end of it, and to fit it up with seats for the accommodation of school children; to take off the roof of the present heating cellar, and build a vestry over the same; to take down the chancel arch, and to re-erect it stone for stone in a wall to be built between the north aisle and the vestry, and to let in the wall alongside of it a panel of freestone with an inscription cut on it stating that this was formerly the chancel arch and the date of its removal; to insert a new chancel arch eleven feet in width, and to build up and make good



the wall above it; to take down the font from its present position, and refix the same at the west end of the south aisle. Mr. C. J. Ferguson, the architect, stated that the plans originally deposited were for a portion of the north aisle, but his lordship the Bishop thought it would be better to carry out a completed scheme, and therefore he, at the suggestion of Mr. Pigott, had prepared plans for the complete scheme, which he now put in. In the carrying out of the work there would be two graves at the west end that would be slightly interfered with, but every precaution would be taken in this case. Gilcrux Church was an Early Norman one, and was a church of some interest, so they might rely upon it that every care would be taken. The chancel arch which they were proposing to take down was a Norman one. It was only five feet wide, and practically divided the church into two buildings. They did not intend to tamper with or injure the arch, but to rebuild it as stated in the application, so that it would be preserved intact. The font also, which was proposed to be removed, was a Norman one, and retained in it the old lead holes, showing that at one time a font cover was locked to the font to prevent the water, which was thought to have some magical power, from being stolen. The north side of the church was that to which additions could be added with the least injury. It was a very curious thing that the church possessed a Norman aisle on the south side. The Chancellor asked what they proposed doing with the space where the old arch was to be removed from? Mr. Ferguson said they proposed to build a new arch 11 feet wide. The Rev. J. C. Pigott said the old arch at the spot where it was to be rebuilt would form the entrance to the new vestry, and would be screened off by a curtain. The Chancellor said he wished it could have been kept in its old position, but it appeared that it was an obstruction there. Mr. Ferguson thought it would be wrong if in carrying out the alterations they should, instead of removing the arch from its present position, widen and mutilate it. The only thing was to preserve it intact. The Rev. J. C. Pigott said the cost would be about 180*l.* or 190*l.*, and he had the greater portion of the money on hand, but he was prepared to enter into a guarantee for the remainder. At present they were without a vestry, and they wanted seats for their worshippers. The population was increasing, and the church was frequently well filled. He thought it would be better if the new chancel arch were 9 feet wide instead of 11 feet. Mr. Ferguson said he thought Mr. Pigott was rather sanguine in the view he took of the cost. He (Mr. Ferguson) had made no estimate of the cost of the work, but he thought it would be about 250*l.* The Chancellor decreed a faculty to be issued to that extent, leaving it with Mr. Ferguson to say whether the arch should be 9 feet or 11 feet wide.

### LOCAL AUTHORITIES AND ART.

THE paper which was read by Mr. T. C. Horsfall at Birmingham was on the question "Are local governing bodies justified in expending large sums of public money for the purpose of beautifying towns and of providing parks, playgrounds, and other facilities for public recreation, and, if so, what are the lines on which they can most advantageously work?" He took for granted that everyone believed it to be the duty of the community to provide for each class those things which it could not provide for itself, and could not lack without great injury to the whole community. He held, therefore, that if he showed that through the failure of local authorities to make towns beautiful, and to provide facilities for recreation for the working classes, grave injury had been caused to the whole country, the question he had to discuss must be answered affirmatively. Pointing out that many children in towns did not know how to play, and that a great many ratepayers, having never learnt to care for beauty either of nature or art, would be opposed to the provision of art galleries, parks, &c., at the cost of the rates, he argued that the help of school managers was needed to teach all townspeople to take wholesome exercise and enjoy beautiful things, and urged that all children should be taught at school how to play games and use gymnastic apparatus, and that all schools should be provided with small collections of pictures and other works of art. He mentioned that in Manchester and Bradford associations had been formed for the purpose of lending pictures to local schools; that the London Art for Schools Association enabled managers of schools in any part of the United Kingdom to buy good pictures at low prices; and that the French Government had lately prepared a series of beautiful photographs and casts of sculpture and engravings for use in French schools of all grades. He then recommended that town councils should make existing playgrounds in towns, including those of all schools, out of school hours, of more use by providing them with gymnastic apparatus and well-trained custodians; that covered gymnasia, like one which had been at work successfully in Manchester for the last two years, should be provided for use in dark evenings and wet weather; and that every large town should be provided with several art galleries similar to one which had been partly furnished in Manchester by the Art Museum Committee, and in which good art was shown applied to things used in the homes of all people of the middle class and of many workpeople. He said that town councils ought to provide large towns with an almost

complete ring round the towns of open spaces, partly consisting of parks, partly of play-fields; but that there was no chance of work so costly being done, as many ratepayers could hardly afford to pay their present rates, unless the inhabitants of large towns acquired the power of including the suburban districts, the inhabitants of which got most advantage from new parks, within the municipal boundary, without the consent of the inhabitants of the suburbs, and unless the owners of land in towns were made to contribute to the municipal revenues.

Dr. Yates approved the views of Mr. Horsfall, and thought that local authorities were more than justified in expenditure on these objects.

Mr. F. Wilson thought that our churches ought to some extent to be also picture galleries for the people.

The Rev. H. Solly warmly sympathised with what Mr. Horsfall had said in favour of turning back the influx into towns from rural districts.

### THE MODERN THEATRE.

A PAPER on "The Drama" was read by Mrs. Kendal at the meeting of the Social Science Congress on Tuesday. The following is an extract:—Let us compare for a moment the play-houses of which we read with those with which we are familiar. In the old days the utmost disorder was allowed to exist in the half-lighted auditorium. Eating and drinking were freely indulged in; smoking was permitted; wine, spirits, and tobacco were hawked about; card-playing was resorted to between the acts; the more distinguished among the audience were allowed to walk and sit on the stage and to converse with the performers. It was no disgrace in those days for gentlemen of good social position to be seen tipsy at a play, and of course drunken brawls and disgraceful quarrels were of frequent occurrence. The entertainment provided on the stage was on a level with the intellect of the audience, and the players were looked upon as "rogues and vagabonds." No wonder that the drama got a bad name, and that people of a puritanical turn of mind regarded it with dismay. Of course, all this is going back a very long way. Matters began by degrees to improve. But I venture to say that it was not until the present generation that correctness in costume, fidelity in scene-painting, and attention to every little detail connected with the action came to be looked upon as absolutely essential to the proper production of a play. Nowadays, indeed, that which is technically known as the staging of a play is in itself a work of true art, and in its own way gives rise to as much thought and care as the author applies to his dialogue or the actor to his part. It has been objected that too much attention is apt to be given to scenery, furniture, and accessories, and that there is a danger of the drama suffering from over-elaboration in this direction. In plain English this means that a thing may be too well done. It seems hard to subscribe to such a theory. Our forefathers, you will remember, were content with a background for their plays, on which the name of the place supposed to be represented was written up, such as "This is Thebes," or "This is a forest," or sometimes even this trouble was not taken, and the actors had to inform the audience where the action of the piece lay. "Our scene is Rhodes" is the brilliant opening line given to an actor in an old drama. These crude arrangements gave way to the introduction of scenery, but it was a long time before anything like correctness was attempted, and we can most of us remember the days when there was no complaint of the thing being "over done." Can it be over done? If a scene is to be represented at all, can it be given with too much truth or attention to detail? Of course, lack of judgment spoils everything, and it is very likely that mistakes in this direction have given rise to complaint. It is useless to lavish mere money on a scene. If the interior of a peasant's cottage is to be represented much expenditure on the furniture would be ridiculous. But surely the artistic care that reproduces the humble home of the labourer down to such details as, say, the "sampler" stitched in silk which his wife worked when a girl at the village school, and which now decorates his walls, is a thing to be admired. Again, if the scene is a landscape ought it not to be made as true to lovely nature as the resources of art will allow? Or if it is a room in a palace, can it be too beautifully given? If the surroundings and minutiae of such scenes are correct and in good taste, they must add not only to the enjoyment but to the education of an audience; for it may be reasonably supposed that the frequenters of the less expensive seats in a theatre have not many opportunities of becoming familiar with interiors of palaces, and it is certain that the jaded city clerk who seeks a little recreation at the play does not see too much of landscape, nor has he a very intimate acquaintance with the indescribable attractions of an English villager's home. Perhaps it would be well for those who are disposed to be satirical concerning what they call over-attention to detail and over-elaboration, to give a thought to this side of the question before airing their opinions. It may even, I think, be conceded that in matters of scenery the improvements are not only great but remarkable. The comfort of the audience, too—is not that considered nowadays as it was never considered before? For obvious reasons I do not often form one of an audience.



myself, but I should certainly think that good light, attention to warmth and ventilation, soft cushions, ample room, good music, and, above all, cleanliness, are things to be appreciated and added to our list of improvements. And while advances in this respect have been made before the curtain, equally great ones have taken place behind it, and actors and actresses are at last surrounded by the conveniences and comforts which gentlemen and ladies have a right to expect. For the improvements—the great improvements—made in this way, honour should be given where honour is due. It was the manager of the London Prince of Wales's Theatre that some seventeen years ago first paid attention to the comfort of the artists engaged, and made the theatre behind the scenes what it now is. This fact should be recorded, because praise is too often given to those who have only followed a good example.

### PRODUCTS OF COMBUSTION.

IN the Health Department at the Social Science Congress, on the 18th inst., Captain Douglas Galton read a paper on "What is the best Method of Dealing with the Products of Combustion?" Referring especially to the matter of smoke, he said that an important method of smoke-prevention, in connection with manufactories, will be to change the rough-and-ready process which we now adopt of burning raw coal into the more scientific method of using gaseous fuel. It was not by methods for improving the consumption of crude coal that we should ever arrive at freeing the atmosphere from smoke. To do this effectually they must resort to gas. Nearly thirty years ago the late Sir W. Siemens endeavoured to introduce into this town gas for heating purposes, both for manufactories and for houses. The opposition of the then gas company prevented this grand experiment, and it had been in abeyance ever since. Still, various industries had succeeded in abolishing smoke by the use of gas, as, for instance, Messrs. Minton, who have done so in their pottery kilns at Stoke, and the use of gas had been extended to baking and other ovens. It was needless in this district to refer to the various improved methods of iron machinery by which smoke is avoided. As to smoke produced in domestic fireplaces, both for cooking and warming, it might be said in general terms that when the fuel is burned in a close stove it is possible to obtain comparative absence from smoke; but there is no doubt that, if smoke abatement be the object to be attained, it is to gaseous fuel in our kitchens that we must look for the solution of the question. Captain Galton concluded by saying that if a cheaper gas for heating purposes were furnished by the corporations in towns or by gas companies, there could be little doubt that the great convenience and cleanliness resulting from its use would soon lead to the abolition of our smoke-giving fires. If they were ever to obtain an atmosphere free from smoke over the vast aggregation of buildings of which our towns are now composed, they could only do so by abandoning the crude method of burning coal in the manner of their early ancestors, and by resorting to the more scientific method of using gaseous fuel.

### THE NEW GOVERNMENT OFFICES.

AFTER the address by Mr. Beresford-Hope had been delivered at the Social Science Congress, Birmingham, Mr. Shaw-Lefevre rose to express the thanks of the members to Mr. Beresford-Hope for his address. As Minister in charge of Her Majesty's public buildings it had been his duty to carry out a policy different from that advocated by the right hon. gentleman. Within the last few months he had had to take part in the selection of a design for the new offices for the Admiralty and the War Office; and he was sorry to say he had not been able to accept the style preferred by his right hon. friend. As the right hon. gentleman was reading his last sentences he could not help thinking that they had been penned to be addressed, not only to the Association, but also to the First Commissioner of Works. This might not be the portent of a new Battle of the Styles, but it might be a suggestion that in the future he should appreciate Gothic rather than Classic. For the new offices 127 architects sent in designs; and only six of these were Gothic. Nine were selected for further competition, and of these only one was Gothic; and that was not the design finally selected. He was actuated by no prejudices upon the subject; he only acted upon the principle laid down in the address that the building should be for the man and not the man for the building. He hoped that although the design was not Gothic a satisfactory building would be erected. Within the last twenty-five years three great public buildings had been erected in London; two of them were Gothic and one was Classical; and one of the Gothic buildings was designed by an architect who was a Classical rather than a Gothic architect, Sir Charles Barry. Next, Mr. Gilbert Scott was directed to produce a Classical building for which he was not specially competent. The next was by a purely Gothic architect and in the purest Gothic style. He believed that Mr. Beresford-Hope was an admirer of it; but whether his opinion was shared by the

public generally he would not say. Thus we had two Gothic buildings and one Classic building; the Classical building was not erected by a Classical architect. It was now proposed to have a fourth building in the Classical style, and by a purely Classical architect; and he hoped he should not find his right hon. friend one of the opponents of the design in Parliament. He must thank the right hon. gentleman for having assisted him on many occasions in the performance of his duties in the House of Commons. Whenever it was necessary to appeal to the House of Commons on a question of public interest he was certain that that appeal would be received by the right hon. gentleman in a spirit entirely free from party exclusiveness, and that his right hon. friend would be animated by the purest motives based upon conviction.

Mr. Beresford-Hope said that he was much touched by the concluding words of his right hon. friend, in whom he had, whether this style or that were adopted, a Minister who understood his work, and long experience of the House of Commons had led him to look for the selection of a First Commissioner of Works not solely on the ground that he understood what he had to do. There was once a First Commissioner who understood his work and tried to do it, but he was contemptuously hustled out of his office. Undeterred by the awful example of Mr. Layard, Mr. Shaw-Lefevre had started on the same plan of action, and had gained the respect and confidence of all whose respect and confidence were worth having. Under our constitution government by party was an absolute necessity; but to bring party motive into art questions was simply detestable. Unregenerate human nature often fell into the temptation to do so; but he trusted he should always be found standing up for the Liberal Minister who had a love for art, and resisting a Tory Minister who had not.

### THE LEASEHOLD SYSTEM.

THE special question which was adopted for discussion in the Section of Economy and Trade at the Social Science Congress on the 18th inst. was the following:—"Would it be advantageous to give to leaseholders powers entitling them to the purchase of the fee-simple of the lands and premises they occupy, or otherwise to interfere by law with the prevailing system of building and other long leases?"

Mr. John T. Emmett read a paper, and gave a description of the method of procedure in the manufacture of leaseholds, by which it appears that the legal costs are heavy, and are needful only because the system is cumbersome; that as a contrivance for inducing wretched building work and miserable houses for the population no more clever and efficient system could have been invented; that leasehold leases are inconvenient and the building is bad; and that this bad system is, in the metropolis and other districts, rapidly extending. The system was then shown to be enormously disadvantageous to the leasing freeholder, whose property is taken by the lessee at an abatement, owing to the nuisance of the tenure, of some 25 per cent. below the freehold value of the land. The reversion to the freeholder, at the end of the lease, of the lessee's property in buildings is only worth one-eighteenth part of the 25 per cent. and compound interest lost by the effect of the lease, which 25 per cent. moreover, had it been continuously employed in trade for ninety-nine years, would have amounted to about twelve hundred times as much as the reversion. This loss is ruinous to territorial families, and keeps their junior branches constantly impoverished. The notion that there is any protection to the leaseholder by the influence of a lease is shown to be fallacious. There is bondage but no protection. Otherwise, why do not freeholders seek to avail themselves of such protection by surrendering their estates in fee to some less wary overlord? Leasehold tenure is not the only cause of evil to house property but it is a most malignant evil; and near London, and in many leasehold towns, the inferiority of leasehold houses to the corresponding work in freehold districts is remarkable. Enfranchisement would be gradual in its operation, and in due time universal, thus improving the condition and morals of the entire population.

Mr. J. S. Rubenstein read a paper, in which he said the enfranchisement of copyholds was the achievement of the last generation. The enfranchisement of leaseholds seems destined to be the achievement of this. As to the evils of the present system, there is, and there can be, no dispute. Sir George Jessel once said that if lessors were to enforce their rights, leases would not exist for six months. Relief against forfeiture is given far more readily than before, but the inherent evils remain. The occupying owner is still but a precarious tenant, whose interest is steadily lessening. In large towns it is almost an impossibility to obtain a house fit for the lessee's purposes, except upon lease. The landlords are masters of the situation; you must take on their terms, or go without. The fact that their terms are agreed to is the strongest proof of the utter helplessness of the public error of believing that so long as the lessee pays the ground rent he can do what he likes with the property. He cannot improve it by additions without his landlord's consent. He may find unreasonable and antiquated covenants, framed to meet surroundings and circumstances long since passed away, still hamper him at every turn; provisions, for



example, that the house is to be kept as a private dwelling-house only, when beside and around him the houses have been converted into shops, and the house as a private dwelling-house is now altogether unsuitable; provisions he might, perhaps, disregard, but only at the risk of litigation, Troubles are intensified where the lease is granted for lives, not for years. The precariousness of life disconcerts all calculations. Leases for lives are gambling in its worst shape. The matter is one in which the whole community is interested. Everybody is interested in repressing "jerry" building, scamped work, sordid uniformity. No one would object to provisions that on a building estate the regulations framed for the general benefit and enjoyment of the occupiers should still be binding even after enfranchisement. Similar provisions apply to nearly all freehold building estates. Enlarged powers should, if necessary, be given to the local authorities for the protection of property. In places where the leasehold system is unknown, capital cities like Paris and Berlin, such evils do not arise. He would be a bold speculator who would acquire land at its value plus the expense of its enfranchisement, with the view of obtaining illicit profit by injuring adjoining property. Mr. Broadhurst's Bill reached a second reading, but was thrown out by 168 votes against 104—a majority of 64. Such a division should greatly encourage all advocates of change. Why should not a *bonâ-fide* occupier for five years have the right to purchase all superior interests? It is to the public interest that as many people as possible should own the house they live in. The new work created by a reform would be sufficient to justify a special tribunal to deal with those particular questions. Where the lease had over a certain term to run, say thirty-five years, the amount should be ascertained on the rental payable, and the price for the time being of consols. In other cases the value would have to be the market value. If these suggestions should be carried into effect, a great step would indeed be taken to putting an end to that severance of ownership from occupation, so long the reproach of our land laws and a blot on our social system.

Professor Leone Levi, while supporting the views expressed in the papers, said that the real difficulty of the question was in settling the terms and conditions on which the enfranchisement should be effected. This would have to be done by arbitrators or some special and competent tribunal.

Mr. Rowlands and Mr. Sturge expressed the same views, the former stating that from inquiries which he had made he had reason to believe that the evils of the present system were even greater in the provinces than in London. He believed that the agitation in favour of Mr. Broadhurst's Bill would become stronger and stronger. Mr. Hurst, on the other hand, thought that, however desirable the general enfranchisement of leaseholds might be, it was certainly not practicable.

Mr. Granger considered that this question was a mere fringe on the larger question of how to make the land a more marketable commodity. If the proposals advocated by Mr. Broadhurst and Lord R. Churchill could be carried out the community would not be benefited. The unearned increment of land should be enjoyed by the community, and not by individuals; and that view had been adopted by the Birmingham Corporation in their recent improvements.

Mr. J. W. Tonks stated that the compulsory enfranchisement of leaseholders would entail a loss of a million of money on the town of Birmingham.

Mr. Griffiths was opposed to the transfer of the right of one class to another. The real want was a thorough reform of our land laws.

Lord Lymington, in summing up the discussion, said they were all convinced of the importance of increasing the ownership of land, and that view he had always maintained. In fact, so far had he gone in that direction that he had on two occasions in the House of Commons supported a proposal introduced by Mr. Jesse Collings, which would have the effect of enabling the State to lend its credit for the purpose of increasing the number of owners. He had not been convinced of the practical benefit which would result from Mr. Broadhurst's Bill, and he had opposed the Bill in the House of Commons. The question of the unearned increment was only a part of the general question of the reform of the land system. They were desirous that the tenure of land in the large cities should be used for the purpose of and to the advantage of the community, and not solely in the interests of an individual. However, those who were in favour of conferring upon the leaseholder the beneficial right to be a freeholder had not been able to answer the financial difficulties. He was bound to say that Parliament had a very doubtful right to interfere and to override the difficulties of a contract originally entered into. One of the difficulties against the working classes obtaining freehold was the shifting and migratory character of the population. It seemed to him that the direction in which the solution of the question should be approached was that of the municipalisation of the land. He did not see why the Corporations of large towns should not obtain compulsory powers to purchase on fair terms land from individual proprietors.

The Kent Archaeological Society will hold its annual meeting in 1885 at the town of Sandwich.

## LEGAL.

Sheriff's Court, York.—September 19.

RAMSDEN v. ROMANY & Co.

ART PUBLISHING.

The plaintiff in this case is a picture dealer living in Leeds, and the defendants are lithographic publishers of Paris and London. The action was brought to recover damages in reference to three paintings, of which the defendants were to have the loan for a time, in order to prepare from them steel-plate engravings for publication and sale. The agreement entered into referred to three pictures:—*The Thin Red Line*, a scene taken from the Crimean War, and *The Retreat from Moscow*, both by Mr. Gibb, R.S.A., and *The Entomologist*. By this agreement, which was dated August 31, 1882, the defendants covenanted that they would, within two years from that time, execute 3,000 copies of *The Thin Red Line* picture, and that the plaintiff should receive as a royalty 5s. upon each copy so issued. Of *The Retreat from Moscow* 3,000 copies were to be taken, at a royalty of 2s. 6d. each; and of *The Entomologist* a very large number of copies were to be taken at a royalty of 6d. per copy, the whole amount due from the royalties being 1,012l. 10s., to be paid within two years. It was further stipulated by this agreement, which was to extend over a period of fifteen years, that all further copies of the pictures should be paid for at the same rate as before. The defendants, however, repudiated their part of the contract, and did not execute any copies of the pictures, alleging as an excuse that they had so much work on hand from America that they had no time to attend to the pictures of the plaintiff. Recently defendants had entered into liquidation proceedings in Paris, and the petition that they had filed showed that their liabilities were estimated at 14,000l., and their assets at 8,000l., so that the plaintiff will be enabled to obtain only half of the sum due to him. Two years having elapsed since the date of the agreement, the plaintiff now brought this action to recover damages. The defendants had allowed judgment to go against them by default, and the jury had therefore only to assess the damages. They found for the plaintiff for 1,012l. 10s., and also an additional sum of 787l. 10s., being an estimate of the royalties likely to be derived up to the end of the fifteen years, or a verdict altogether of 1,800l.

## CHURCH BUILDING AND RESTORATION.

**English Church in Moscow.**—On the 14th inst. the first religious service was performed in the new English church in Moscow. English visitors who have spent a Sunday in the ancient capital of Russia will remember the old house in the Tchernishvsky Peréoulok, which did double duty, containing as it did the large room employed as a church, and in the other wing the residence of the clergyman in charge. The new edifice is on the site of the old, of which the very foundations were removed to give place to those of its successor. Small as the English community is in Moscow and the neighbourhood, a very short time sufficed to raise the sum of 16,000l. which the building has cost, individual examples of very great liberality helping in this most important part of the undertaking. With only one exception, all the money has been raised among those who worship in the church and their countrymen. The church, a handsome Anglo-Gothic structure in red brick, was built after the designs of Mr. Freeman, of Bolton, who entrusted the actual personal superintendence of the work to Mr. Freidenberg, of Moscow, but paid a visit to Moscow last year, to be assured that all his plans and instructions were being carried out. About 300 people find accommodation in the body of the church; and the building also contains a library, committee-room, and small lodging for the caretaker. The construction of the clergyman's residence, which will be on the same plot of ground, but detached, will be proceeded with next year.

**Rigby.**—The new church on the road leading from Stoke Prior to Finstall has been opened, but for the present the north transept, organ chamber, vestry, and steeple are omitted, although the permanent arches are turned to permit of extension at any future time without involving structural disturbance. The internal length of the church is 91 feet; width of nave, 24 feet 6 inches; width of chancel, 17 feet; height (from floor to wall plate), 15 feet 6 inches; to apex of nave ridge, 33 feet 6 inches. The building is constructed to seat 214 adults and 26 children, and there will be accommodation for 22 men and boys in the choir seats of the chancel. The materials used have been for the walling the local Finstall stone. The interior is lined chiefly with pressed buff bricks, the lower portion of the walls being rendered in Portland cement. The dressings to windows and doorways and the copings are in box-ground Bath stone, the internal dressings being in moulded brick, grey Bromsgrove stone, Finstall stone, and Corsham stone. The roof is open timbered, and plastered and coloured between the rafters. The seating is of red deal, stained and varnished; the bench ends throughout of pitch pine cut to shape and moulded; and the fronts to the choir seats are open framed, pierced, and moulded. Externally the roof is covered with purple tiles, with red ridge crestings. The walling is finished with a rough tooled face. The east gable has a three-light tracery window



filled with stained glass at the cost of Mr. W. Robson. The windows generally are glazed with cathedral tinted glass (the prevailing tone being amber), with floriated pattern work in the tracery. Mr. John Cotton, of Birmingham, is the architect, and Messrs. Brazier & Weaver the contractors.

**Hamilton.**—A free church in Hope Street has just been opened. The design of the building is a free adaptation of ancient Gothic, a striking feature being a handsome spire at the left hand corner of the building. The central doorway is flanked with polished pillars of red granite, with vestibule having staircase on each side leading to the gallery, and two doors leading to the interior of the church, 50 feet long by 42 feet wide, divided by means of light iron pillars into nave and aisles of four bays, each bay being lighted by a two-light window with tracery on the head. There is a gallery at the sides of two seats deep, and a larger gallery at the end extending over the entrance vestibule. A door on each side of the pulpit platform leads to a class-room 30 feet by 18 feet, and a vestry 14 feet by 10 feet, with a staircase to similar apartments below. The fall of the ground at this end of the building admits of this under storey without having to sink below the natural level. Instead of the usual wood lining round the church, which is so liable to rot, the walls are lined to a height of 4 feet with a dado of red pressed bricks, which give warmth of effect and solidity of appearance to the interior. The tower, 17 feet square, rises to a height of 50 feet, and crowned with spire, to a total height of 138 feet. Adjoining the tower is the main gable and aisle of building with central entrance subdivided into two, with foiled circle fanlight in the tympanum to give light to the vestibule. The walls are faced with square ragstone from the Lanark quarries, and with hewn freestone from Wishaw. Messrs. Martin & Symington, Carluke, were the masons; Archibald Millar, Motherwell, the joiner; Thomas Lithgow, slater and plasterer; James Wood, plumber; Robert Symington, painter—all of Lanark; Meikle & Sons, Glasgow, glaziers; Messrs. W. & J. Hay, Liverpool, architects; and Mr. William Cassels, Lanark, clerk of works.

### SCHOOL BUILDINGS.

**Delph.**—On Saturday last the memorial-stones of a new Sunday-school in connection with the Delph Independent chapel were laid. The schools will consist of large schoolroom with platform, infant school, class-rooms, cloak-rooms, and caretaker's house. The style of architecture is a free treatment of late Gothic, the principal feature of the front elevation being a projecting central bay, containing the main entrance, the inscription and memorial-stones. The large schoolroom, standing back from the front portion of the building, will measure internally 52 feet by 29 feet, and will have an open-timbered roof of simple design, the platform being at the further end. The buildings will be faced externally with Yorkshire parpoints, relieved with sandstone dressings, and the roofs will be slated with Welsh slates. Provision has been made for the heating of the rooms with hot water, and great attention has been paid to securing the best means of ventilation. The various rooms on the ground floor are to be laid with patent wood blocking, which is noiseless, and also impervious to damp and dry rot, which is so prevalent in the locality. Mr. A. Banks, architect, Oldham, has prepared the plans, and is superintending the erection of the building, the chief contractor being Mr. C. Winterbottom, Delph. The cost of the new schools will be about 1,500*l*.

### GENERAL.

**The Duke of Westminster** has contributed the sum of 4,000*l*. and a further donation of 100*l*., towards the Chester Museum and Schools of Science and Art, shortly to be commenced on the Grosvenor Road, at Chester.

**A School of Science and Art** is proposed to be erected at Southport, at an estimated cost of 6,000*l*.

**An Art Exhibition** in connection with the Local Arts, Science, and Sanitary Association was opened on Wednesday at Eastbourne by the mayor, Mr. G. A. Wallis.

**A Pulpit** designed by Mr. J. Middleton has been presented to St. Stephen's Church, Cheltenham.

**Mr. Walter Hall**, surveyor and auctioneer, of No. 28 Southampton Buildings, is removing to more extensive offices at No. 38 Chancery Lane, where he will continue to practice as a surveyor and auctioneer.

**The London Corporation** have during the past year expended the following sums:—Guildhall Library and Museum, 4,627*l*.; New Council Chamber, 19,517*l*.; Health Exhibition, 5,000*l*.; Gresham Almshouses, 4,250*l*.; Central Fish Market, 9,393*l*.; Enlargement of Leadenhall Market, 55,234*l*.; City of London School, 19,160*l*.; Thames Outfall Inquiry, 5,000*l*.; Technical Education, 2,000*l*.; School of Music, 4,066*l*.

**A New Font** has been placed in the Earl of Zetland's private chapel at Aske Hall, from designs by Messrs. Clark & Moscrop, architects, of Darlington, and executed by Mr. Ralph Hedley, of Newcastle-upon-Tyne.

**A Collection of Pictures** by Mr. Watts, R.A., is to be exhibited in New York.

**The Committee** of the Leeds Public Library and Museum intend to hold a fine art exhibition, which they expect to be able to open on October 16 next.

**Professor Roger Smith** will open the classes of architecture, construction, and modern practice at University College, London, by a public introductory lecture on the Wall as an Architectural Feature, including the Tower and the Gable. The lecture will take place at the College in Gower Street on Friday, October 3, at 6 P.M. Admission will be free.

**A Baptistry** has been added to the church of St. Andrew, Fort William, from the designs of Mr. Alexander Ross, of Inverness. The windows are by Messrs. Clayton & Bell. The addition is the gift of Mr. G. B. Davy.

**A Pastoral Staff**, which has been designed by Messrs. Bodley & Garner, will be presented to the Bishop of Carlisle on Tuesday.

**The Bishop of Peterborough**, when preaching at the reopening of a church at Duston, told the congregation that churches were not architectural museums merely designed for the recreation and instruction of persons of an archaeological turn of mind, but places designed for worship and the comfort of those who attended them, and whatever interfered with these objects should be removed.

**Mr. A. J. Grahame**, of Balliol College, is to lecture on "English Architecture," in connection with the classes of the London Society for the Extension of University Teaching.

**Mr. J. A. Chatwin**, of Birmingham, is preparing a design for the monument to be erected over the grave of the late Vicar of Edgbaston.

**The French Competition** for a design for a prison on the cellular system has not been successful, and the Société Générale des Prisons have extended the time for receiving fresh designs until March 1, 1885.

**The New Buildings** for the Ecole Centrale des Arts et Métiers in the Carré Saint-Martin, Paris, will be inaugurated on October 15.

**The Friends' Meeting-House**, in York, is to be reconstructed at a cost of about 4,000*l*. The style adopted is French Renaissance of the seventeenth century.

**Herr Hartmann**, of Berlin, has reported on the London Health Exhibition for the Society of Health Technics. While recognising the costliness and magnificence of its productions, he says it is anything rather than a health exhibition, and that from a scientific point of view it is simply pitiful.

**Mr. Frederick Layton** has, according to the *New York Times*, resolved to present an art museum to his fellow townsmen. It is to be designed by Messrs. Audsley, of Liverpool, in the "Thompsonian Greek style."

**The Directors** of the French Protestant Hospice in London have commissioned a Kentish archæologist to transcribe the inscriptions on the tombstones of the French Walloon refugees, who settled in Canterbury three centuries ago, in the various churchyards in Canterbury and the neighbourhood.

**The Bishop of Durham** has appealed for further aid for the Diocesan Church Building Fund. The sum hitherto contributed does not exceed half the amount which it was proposed to raise, and which must be raised, if the reasonable wants of the diocese are to be supplied.

**The Islington Vestrymen** have declined the Marquess of Northampton's offer to place Canonbury Tower in the hands of the parish at a nominal rental. The chief grounds appear to have been that the tower is in need of repair, and that the noble owner was only able to grant a "short and uncertain tenure."

**A Swimming Bath** has been constructed on the premises of the Polytechnic Young Men's Christian Institute at a cost of over 8,000*l*. It is a gift from Mr. Quintin Hogg.

**The Committee** for the proposed district hospital, Newbury, have decided to obtain plans for a hospital of eight beds, allowing 1,200 cubic feet for each patient, with provision for an extension to twelve beds.

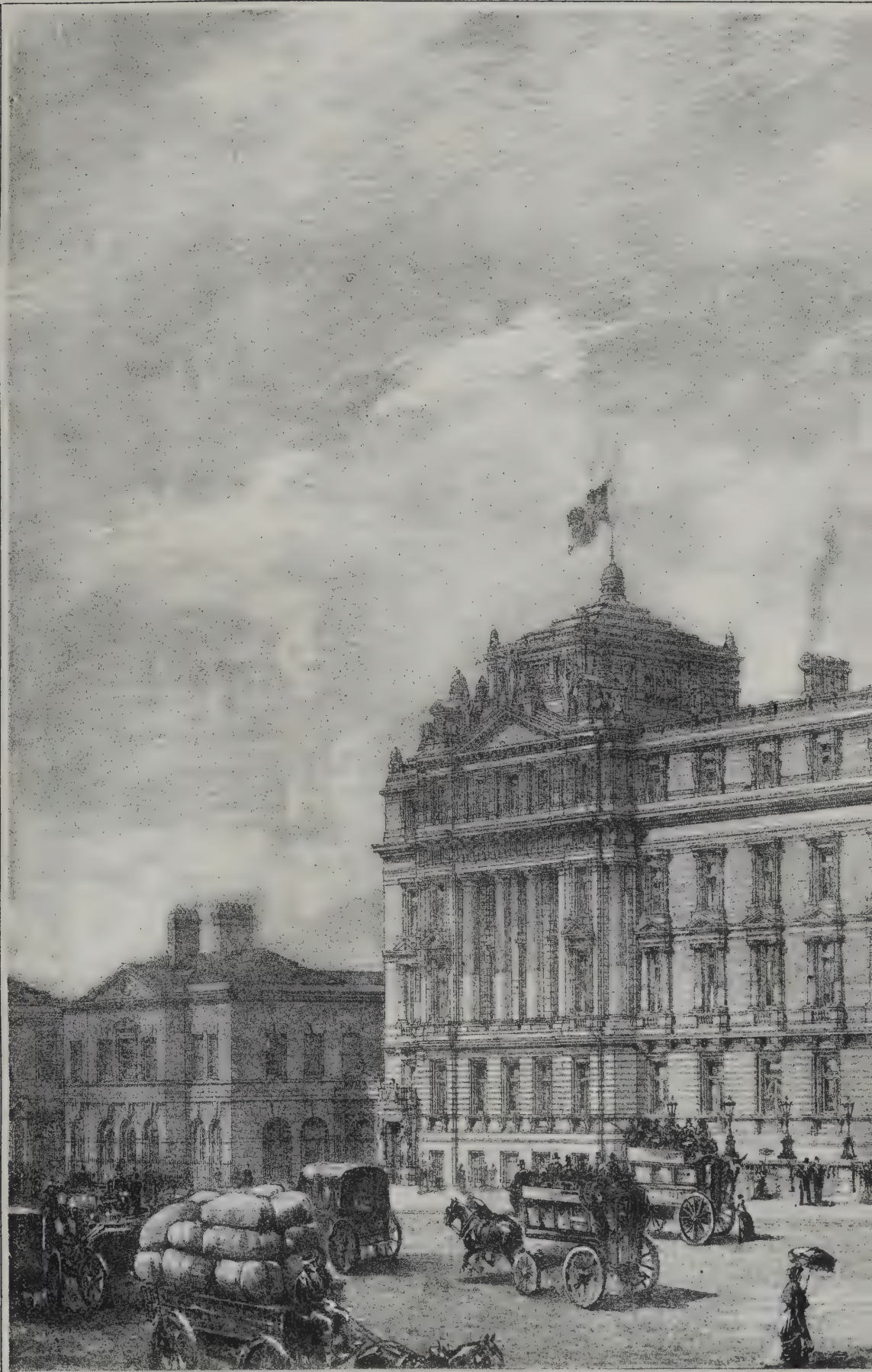
**The Gold Medal** of the International Exhibition, Crystal Palace, 1884, has been awarded to the Patent Victoria Stone Company for their artificial stone paving, sinks, steps, and landings exhibited at their stall in the south wing.

**The Highest Award** at the International Forestry Exhibition—the first-class gold medal—has been obtained by Messrs. Robey & Co., of the Globe Works, Lincoln, for excellence in manufacture and design of their engines and machinery.

**A New Theatre** has been erected in Constantine, Algeria, from the designs of M. Paul Gion, at a cost of over 1,200,000 frs. The ceiling has been painted by M. Urbain Bourgeois, of Paris. The statues of *Music* and *Dancing* are by MM. Mabille and Jugrand.

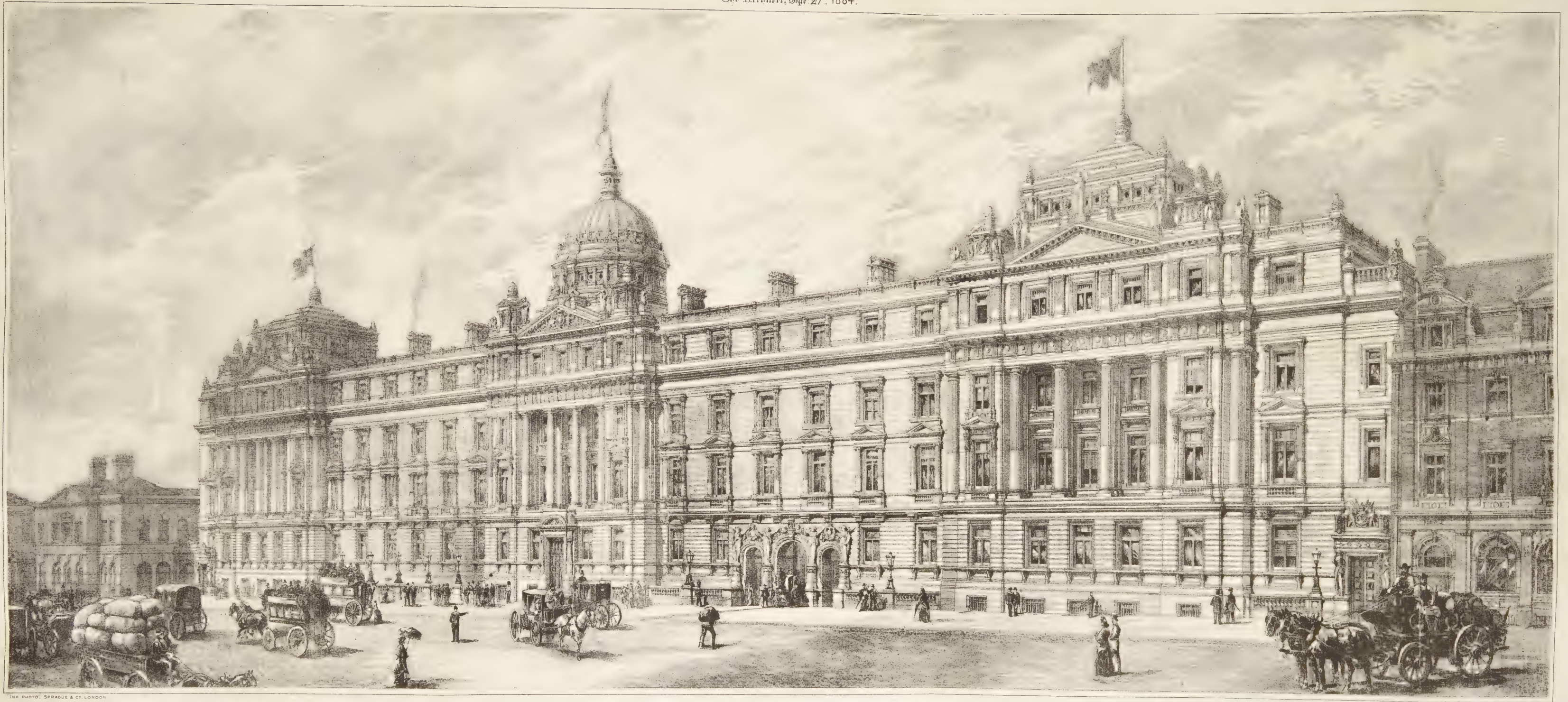
**The Auchmatie Hotel** on the coast of Scotland between Arbroath and Montrose was destroyed by fire on Monday. It was a building of much interest owing to its connection with Scott's novel, "The Antiquary."





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# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, SEPTEMBER 27, 1884.

### COMPETITIONS OPEN.

**BOMBAY.**—Nov. 6.—The Municipal Commissioner of Bombay invites Designs and Estimates for a New Municipal Hall and Offices, which must be sent to his Office by Twelve noon, on Nov. 6. A Premium of 5,000 rs. will be given for the Design most approved of by the Commissioner, with the assistance of a Committee of the Corporation; 3,000 rs. for the second, and 2,000 rs. for the third. The total cost of the buildings is not to exceed 5 lacs (5,00,000 rs.). Mr. E. C. K. Ollivant, Municipal Commissioner's Office, Bombay, or at Messrs E. W. & R. Oliver, 1 Corbet Court, Gracechurch Street, London.

**EGHAM.**—Oct. 11.—Designs are invited for the Erection of a School to accommodate 320 Children. Mr. Benjamin Tice, Clerk to the School Board, Irene Villa, Egham.

**STOCKPORT.**—Oct. 1.—Designs are invited for Public Baths. Premiums of £50, £30, and £20. Mr. Walter Hyde, Town Clerk Stockport.

### CONTRACTS OPEN.

**BELFAST.**—Oct. 1.—For Building Five Houses, Newtownards Road. Messrs. J. Frazer & Son, C.E., Architects, 117 Victoria Street.

**BIDEFORD.**—Oct. 1.—For Enlarging Chapel. Mr. J. Crocker, Architect, Exeter.

**BISHOP AUCKLAND.**—Sept. 27.—For Building Dwelling-house, West Auckland. Mr. R. R. Rule, Architect, Station View, Bishop Auckland.

**BLYTH.**—Sept. 27.—For Restoration of Church. Mr. C. Hodgson Fowler, Architect, The College, Durham.

**CARLISLE.**—Sept. 30.—For Building Manure Works, Kirkbride Junction. Mr. James Leslie, Architect, 27A English Street, Carlisle.

**COCKERMOUTH.**—Sept. 27.—For Taking Down and Re-erecting Buildings at Globe Hotel. Mr. R. S. Marsh, Surveyor, Cockermouth.

**CONSETT.**—Oct. 1.—For Building County Court Offices, H.M.'s Office of Works, 12 Whitehall Place, S.W.

**CROYDON.**—Sept. 30.—For Additions to Vagrant Wards at Workhouse. Messrs. Berney & Monday, Architects. Messrs. Franklin & Andrews, Surveyors, 25 Ludgate Hill, E.C.

**CUSHENDALL.**—Oct. 1.—For Resetting and Enlarging Parish Church. Rev. W. Thompson, Layde Rectory, Cushendall, co. Down.

**DARLINGTON.**—Sept. 29.—For Building Board School's in Beaumont Street. Mr. F. W. Brooks, Architect, 41 High Row, Darlington.

**DELFH.**—Sept. 30.—For Building Branch Bank for the Manchester and County Bank. Messrs. J. Lawton & Sons, Architects, St Chad's, Uppermill.

**DENTON.**—For Building Four Houses. Messrs. Taylor Bros, Denton.

**DUNDEE.**—For Additions to Glebe Lands School. Mr. David MacLaren, Architect, 81 Murraygate, Dundee.

**DUNFERMLINE.**—Oct. 1.—For Building Double Cottage at Cameron Bridge. Mr. John Houston, Architect, Dunfermline.

**GOSFORTH.**—Sept. 29.—For Building Police Station Mr. John Cresswell, County Architect, Moot Hall, Newcastle-on-Tyne.

**GUILDFORD.**—Sept. 30.—For Building Small House at Sand Tannery. Messrs. Peak, Lunn & Peak, Architects, 3 Market Street, Guildford.

**HAMMERSMITH.**—Oct. 2.—For Rebuilding Superstructure and Strengthening Hammersmith Bridge, Construction of Temporary Bridge, &c. Sir J. W. Bazalgette, Spring Gardens, S.W.

**ILKLEY.**—Sept. 30.—For Construction of Sewers, &c. (1,030 feet), with Works in Connection. Mr. M. Hainsworth, jun., Clerk to the Local Board, Brook Street, Ilkley.

**KEIGHLEY.**—Oct. 1.—For Building Warehouse, Damems. Mr. S. Jackson, Architect, 33 Kirkgate, Bradford.

**KIRKHAM.**—For Building Four Houses and Shops. Mr. Edwin Bush, Architect, 9 Chapel Street, Preston.

**LEEDS.**—Sept. 30.—For Building Warehouse and Premises, Savile Street. Mr. David Drury, Architect, 37 Park Square, Leeds.

**LEEDS.**—For Building Two Houses. Mr. D. Dodgson, Architect, 16 Park Lane, Leeds.

**MARYPORT.**—Oct. 3.—For Building Battery, Drill Shed and Offices. Director of Works Department, Admiralty, 71 Spring Gardens, S.W.

**NEWCASTLE-ON-TYNE.**—Sept. 30.—For Clearing Site and Building Offices for the Tyne Improvement Commissioners. Mr. J. J. Stevenson, 18 Queen's Road, Bayswater, W.

**NEWHAVEN.**—Sept. 23.—For Buildings on new Quay. The Chief Engineer, London Bridge Terminus.

**NORTHCUMBELAND.**—Oct. 6.—For Additions and Alterations to Hoppin and Glorum Farm Buildings, Spindleton Estate. Messrs. Austin & Johnson, Architects, 3 Arcade, Pilgrim Street, Newcastle-on-Tyne.

**OLDHAM.**—Sept. 29.—For Alterations to Albion Mills. Mr. Joseph Stott, Architect, 26 Clegg Street, Oldham.

**ORMSKIRK.**—Oct. 1.—For Building Workhouse School and Premises. Mr. Thomas Kissack, Architect, Albany Buildings, Church Street, Ormskirk.

**OSSETT.**—Oct. 1.—For Enlargement of Methodist Chapel. Messrs. Kirk & Sons, Architects, Dewsbury.

**PONTYPRIDD.**—Sept. 29.—For Building Public Hall, Shops, Offices, and new Roof to Markets. Messrs. James, Seward & Thomas, Architects, St. John's Chambers, Cardiff.

**SALISBURY.**—Sept. 27.—For Rebuilding Cottage at Waterworks. Mr. W. C. Powning, Town Clerk, Salisbury.

**SCARBOROUGH.**—Sept. 29.—For Providing and Fixing Ornamental Wrought-Iron Railing (90 yards), and Gates for Enclosing the Under Cliff. Mr. John Petch, Architect, Scarborough.

**SUNDERLAND.**—Oct. 6.—For Boundary Walls, Iron Pali-sading, &c, for Cemetery Extension. Mr. D. Balfour, C.E., Houghton-le-Spring.

**SWANSEA.**—Sept. 29.—For Construction of Mortuary. Mr. J. Thomas, Town Clerk, Guildhall, Swansea.

**SWINFORD.**—Sept. 30.—For Alterations at Workhouse Infirmary. Mr. W. Hague, Architect, 62 Dawson Street, Dublin.

**UPAVON.**—Sept. 29.—For Building Farmhouse and Stables. Messrs. John Harding & son, Architects, 51 Canal, Salisbury.

**VAUXHALL.**—For Extension to Laundry. Mr. B. Swin-stead, Surveyor, Clacton-on-Sea.

**WEST HARTLEPOOL.**—Sept. 30.—For Erection of Wooden Theatre. Mr. J. Garry, 1 Church Street, West Hartle-pool.

**WIDNES.**—Sept. 29.—For Erection of Public Offices and other Buildings. Messrs. F. & G. Holme, Architects, Dale Street, Liverpool.

### TENDERS.

#### CARLISLE.

For Construction of Drying-closet at the Fusehill Work-house, Carlisle.

Hayton & Son, Manchester	£133	5	0
Bell, Carlisle	110	0	0
Larnmouth, Manchester	86	2	6
Bratford & Co., Manchester	84	0	0

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

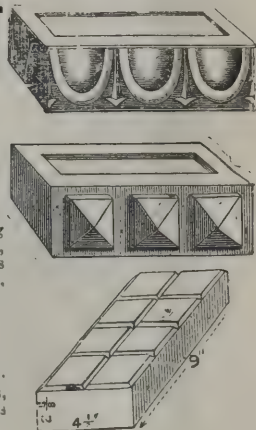
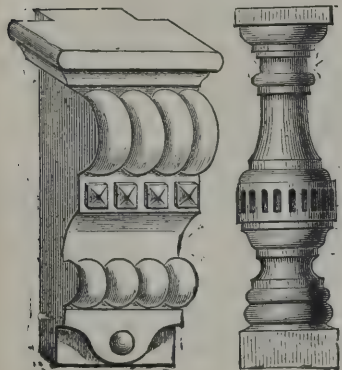
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**BERRY BROW.**

For Taking Down and Rebuilding the Methodist New Connexion Chapel, Berry Brow, near Huddersfield, exclusive of Ironfounder and Heating Apparatus. Mr. J. H. BURTON, Architect, Ashton-under-Lyne.

*Reduced Tenders.*

Excavating, Draining, Walling, Masonry, and Slating. Stocks & Sons, Berry Brow. . . . . £1,356 8 0  
(Six tenders were received.)

*Carpenter and Joiner.*

Dawson & Jones, Huddersfield. . . . . 765 0 0  
(Sixteen tenders were received.)

*Plumber and Glazier.*

Garton, Huddersfield. . . . . 124 0 0  
(Eight tenders were received.)

*Plasterer.*

Jessop & Son, Berry Brow. . . . . 135 0 0  
(Five tenders were received.)

*Painter.*

Littlewood, Berry Brow. . . . . 38 0 0  
(Eleven tenders were received.)

Total . . . . . 2,418 8 0

**BLACKBURN.**

For Erection of Mill, at Church, for Mr. N. Wilkinson. Mr. JAMES BERTWISTLE, M.S.A., Architect, Blackburn. Quantities by Architect.

*Accepted Tenders.*

Maden, Accrington, mason and flagger. . . . . £987 10 0  
Ashton & Frost, Blackburn, ironfounder. . . . . 630 0 0  
Waddington, Accrington, joiner. . . . . 570 0 0  
Whitehead, Accrington, slater. . . . . 376 0 0  
Carter & Son, Accrington, plumber, glazier, and painter. . . . . 153 17 6  
Crowshaw, Accrington, plasterer. . . . . 93 0 0

For Extension to Fisher Street Mill, Blackburn, for Messrs. S. A. Nicholls & Co. Mr. JAMES BERTWISTLE, M.S.A., Architect, Blackburn. Quantities by Architect.

*Accepted Tenders.*

Duerden, mason.  
Harrison, joiner.  
Latham, flagger and slater.  
Chadburn, plumber and glazier.  
All of Blackburn.

For Alterations at the Castle Hotel, Blackburn, for the Lancashire and Yorkshire Railway Company. Mr. JAMES BERTWISTLE, M.S.A., Architect, Blackburn. Quantities by Architect.

IBBOTSON, Blackburn.

**BOURNEMOUTH.**

For Alterations to Easton Glen, Bournemouth. Mr. H. E. HAWKER, Architect.

Jenkins & Son. . . . . £350 0 0

For Additions to Francroft, Bournemouth. Mr. H. E. HAWKER, Architect.

Blackford. . . . . £300 0 0

For Alterations to Tebbington Towers, Bournemouth. Mr. H. E. HAWKER, Architect.

Blackford. . . . . £200 0 0

For Erection of a House, Westover Road, Bournemouth. Mr. H. E. HAWKER, Architect.

Hoare Bros. . . . . £2,950 0 0

McWilliam. . . . . 2,859 0 0

Jenkins & Son. . . . . 2,850 0 0

GEORGE (accepted). . . . . 2,668 0 0

**BUSHEY.**

For the Erection and Completion of a New Girls' and Infants' School at Bushey Village, for the Bushey School Board. Mr. W. H. SYME, A.R.I.B.A., Architect, Watford.

Kirby, Great Stanmore. . . . . £2,335 0 0

Scrivenor & Co., London. . . . . 2,268 0 0

Dove Bros., London. . . . . 2,250 0 0

Andrews, Watford. . . . . 1,976 0 0

Waterman, Watford. . . . . 1,777 0 0

Chadwick, Watford. . . . . 1,776 0 0

Turner, Watford. . . . . 1,766 0 0

CLIFFORD & GOUGH, Watford (accepted). . . . . 1,724 0 0

**CLAINES.**

For Construction of Pipe-sewers, &c., Receiving-tank at Outfall, Engine-house, Filter-beds, Claines, Worcester. Mr. A. HILL PARKER, Engineer. Quantities by Mr. Ralph Pitt, Staines.

Adams, London. . . . . £7,982 0 0

Small & Sons, West Bromwich. . . . . 7,800 3 0

Bottoms Bros., Battersea, S.W. . . . . 7,434 0 0

Hilton & Sons, Birmingham. . . . . 6,895 0 0

Welsh, Hereford. . . . . 6,384 0 0

Vale, Hartlebury. . . . . 5,930 0 0

Currall & Lewis, Birmingham. . . . . 5,900 0 0

Cowdery & Sons, Newent. . . . . 5,434 0 0

Cooke & Co., Battersea, S.W. . . . . 5,200 0 0

LAW, Kidderminster (accepted). . . . . 4,977 0 0

**CLEATOR MOOR.**

For Construction of Coal and Lime Depots, Weigh-bridge, Foundations, Railway Siding, &c., for the Cleator Moor Gas Company. Mr. G. BOYD, C.E., Whitehaven.

R. & D. Pearson, Cleator Moor. . . . . £296 0 0

Fleming & Murray, Cleator Moor. . . . . 379 7 0

Marlow Bros., Maryport. . . . . 224 10 0

White & McMahon, Cleator Moor. . . . . 203 2 3

**CRICKHOWEL.**

For Building Residence at Gliffas, near Crickhowel, Brecknockshire, for the Rev. W. H. West. Messrs. BROWN & GILL, Architects, Bath. Quantities by Mr. B. W. Pope, Bristol.

Bowers & Co., Hereford. . . . . £6,144 10 0

King, Gloucester. . . . . 5,748 0 0

Thomas, Abergavenny. . . . . 5,508 0 0

Williams & Sons, Brecon. . . . . 5,400 0 0

Forse, Bristol. . . . . 4,990 0 0

Jones & Co., Gloucester. . . . . 4,690 0 0

Welsh, Hereford. . . . . 4,294 0 0

**CHISWICK.**

For Making-up Roads, &c., Chiswick. Mr. G. R. STRACHAN, Surveyor.

*Bedford Park.*

	£	s	d
Whichham, Bedford Park	5,555	—	—
Rowles, Acton	4,574	—	—
Bottoms Bros., Battersea	5,004	558	—
Ball, Chiswick	4,714	320	—
Adams, Moorgate Street	4,736	384	—
S. & J. Saunders, Fulham	4,604	375	—
Neave & Son, Paddington	4,679	450	—
Neal, Wandsworth	4,636	554	—
Nowell & Robson, Kensington	4,133	472	—
Mowlem & Co., Westminster	4,023	275	—
Trehearne, Battersea	4,252	687	—
Surveyor's Estimate	4,656	—	—

A. Allowance for material on roads.

*Chiswick New Town.*

	£	s	d
Neave & Son	2,514	0	0
Tomes	2,514	0	0
Rowles	2,452	0	0
Peill & Sons	2,439	0	0
Adams	2,379	0	0
Trehearne	2,346	0	0
Aldred, Chiswick	2,319	0	0
H. & J. Saunders	2,312	0	0
Neal	2,263	14	0
Nowell & Robson	2,256	0	0
Mowlem & Co., Westminster	2,157	0	0
Ball, Chiswick	2,117	0	0
Surveyor's Estimate	2,274	16	0

*Holly Road.*

	£	s	d
Bottoms Bros.	635	0	0
Neave & Son	634	0	0
Adams	619	0	0
H. & J. Saunders	616	11	0
Neal	590	0	0
Rowles	580	0	0
Nowell & Robson	577	0	0
Ball	570	0	0
Trehearne	565	0	0
Aldred	557	0	0
Mowlem & Co.	535	0	0
Surveyor's Estimate	680	0	0

*Devonshire Road and Wellesley Road.*

	£	s	d
Bottoms Bros.	770	0	0
Adams	767	0	0
Neave & Son	734	0	0
Neal	716	18	0
Trehearne	715	0	0
H. & J. Saunders	702	0	0
Rowles	698	0	0
Mowlem & Burt	675	0	0
Ball	670	0	0
Nowell & Robson	669	0	0
Aldred	659	0	0
Surveyor's Estimate	685	4	0

**DORKING.**

For Drainage of Town of Dorking.

CROOK & SMITH, Southampton (accepted). . . . . £9,120 0 0

The lowest of nineteen tenders.

For Photographic Studio, High Street, Dorking, for Mr. W. G. FENN. Mr. FREDERICK W. LEDGER, Architect, London.

Hammond, Dorking. . . . . £471 4 2

Nightingale Bros., Reigate. . . . . 432 0 0

Edser, Dorking. . . . . 410 0 0

Docking, Croydon. . . . . 401 0 0

BURDETT & SON, Guildford (accepted). . . . . 379 16 9

**EAST MARDEN.**

For Additions to Two Cottages, East Marden, near Emsworth, for Admiral Sir G. P. Hornby, K.C.B. Mr. JAMES NEWMAN, Architect.

BLACKMORE (accepted). . . . . £185 0 0

**EDINBURGH.**

For Reconstruction of the Theatre Royal, Edinburgh. Mr. C. J. PHIPPS, Architect.

W. & D. McGregor. . . . . £6,000 0 0

**GREAT HARWOOD.**

For Highway Repairs, Great Harwood.

Ashton, Darwen. . . . . £157 0 0

G. Read, Great Harwood. . . . . 100 0 0

R. Read, Great Harwood. . . . . 97 0 0

Broadley, Clayton-le-Moors. . . . . 78 0 0

Mercer, Whalley. . . . . 77 0 0

Hartley, Great Harwood. . . . . 70 0 0

**GUILDFORD.**

For Building Board School for 500 Children, Charlottetown, Guildford. Mr. W. G. LOWER, Architect. Quantities by Mr. Henry Moon.

Colls & Sons, Dorking. . . . . £5,876 0 0

Woodbridge, Maidenhead. . . . . 5,784 0 0

Mitchell Bros., Stratford. . . . . 5,697 0 0

Redford & Potter, Horsham. . . . . 5,600 0 0

Ingram, Woking. . . . . 5,578 0 0

Bottrill, Reading. . . . . 5,475 0 0

Rowland, Horsham. . . . . 5,400 0 0

Longley, Crawley. . . . . 5,394 0 0

Woolgar & Sons, Horsham. . . . . 5,380 0 0

Woods, Weybridge. . . . . 5,251 0 0

Stafford, Peckham. . . . . 5,249 0 0

Aldridge & Jenvey, Camberwell. . . . . 5,114 18 0

Stephens, Bastow & Co., Bristol. . . . . 5,000 0 0

Kinglee, Oxford. . . . . 4,950 0 0

Peters, Horsham. . . . . 4,947 0 0

Mower, Hackney. . . . . 4,890 0 0

**IRTHLINBOROUGH.**

For Alterations and Additions to Wesleyan Chapel, Irtlinborough. Mr. EDWARD SHARMAN, Architect, Welinborough. Quantities not supplied.

Underwood, Welinborough. . . . . £254 0 0

Clayson & Sharnan, Cogenhoe. . . . . 249 0 0

Ward & Saxby, Irtlinborough. . . . . 225 0 0

Lovell & Streather, Raunds. . . . . 225 0 0

Abbott, Hudson & Stevens, Harrowden and Welinborough. . . . . 216 0 0

**KIDDERMINSTER.**

For Building Offices and Warehouses, Mill Street, Kidderminster. Mr. J. M. GETHING, Architect, Church Street, Kidderminster.

	£	s	d
Claridge	3,849	0	0
Hilton & Sons	3,220	0	0
Bate	3,200	0	0
Dorse & Son	3,187	0	0
Guest	2,940	0	0
Howard & Sons	2,900	0	0
Bennett	2,847	0	0
BINNLAN & SON (accepted)	2,800	0	0
Smith	2,769	0	0
Horton	2,685	0	0
Bradney & Co.	2,670	0	0

**LEICESTER.**

For Building Shops and Offices on South Side of Market Place, Leicester. Messrs. WHEELER, HOLLANDS & JAMES, Architects, 119 Cheapside, E.C. Quantities by Messrs. Evans & Deacon, 1 Adelaide Street, Charing Cross, S.W.

	£	s	d
Barnett	3,310	0	0
Jewsbury	3,241	0	0
Bass	3,175	0	0
Kellett & Sons	3,169	0	0
Bland	3,150	0	0
Tyers	3,100	0	0
Plant	3,086	0	0
Wright	3,069	0	0
Major	3,049	0	0
W. & H. Herbert	3,023	0	0
DUXBY & SONS (accepted)	3,000	0	0

**LONDON.**

For Additions to the Scottish Club, Dover Street, Piccadilly, W., for Lieut.-Col. Gordon Alexander. Mr. E. P. LORUS BROCK, F.S.A., Architect.

	£	s	d
Hall, Bedford & Co.	2,620	0	0
Mattock Bros.	2,419	0	0
Perry & Co.	2,349	0	0
Boyce Bros.	2,293	0	0
Weston	2,263	0	0
Haynes	2,050	0	0
Cole	1,991	10	0

For Taking Down and Re-erecting Portions of the Parapet Walls, &c., at the St. Marybone Workhouse, for the Guardians of the Poor of the Parish of St. Marybone. Messrs. H. SAXON SWELL & SON, Architects, 22 Southampton Buildings, W.C.

	£	s	d
Webb	185	0	0
Bamford	170	0	0
Wall Bros.	154	0	0
French	146	10	0
Burridge & Cullen	145	0	0
Martin	130	0	0
SHEERMAN & SONS (accepted)	98	9	0

For Repairs and Alterations to Nos. 315 and 317 Oxford Street, W., for Mr. Patrick Ness and Messrs. Hards, Vaughan & Jenkinson. Mr. R. T. H. STONEHAM, Architect, 8 Moorgate Street, E.C. Quantities by Mr. C. Jackson, West Brighton.

	£	s	d
Conder	3,995	0	0
Ashby Bros.	3,861	0	0
Perry & Co.	3,700		



**PADIHAM.**

For Constructing Reservoir for the Padiham and Hapton Local Board.  
Cooper & Tullis, Preston . . . £29,517 11 0  
Lowest Tender, and recommended for acceptance.

**SANDOWN.**

For Additions to the Primitive Methodist Chapel, Sandown, Isle of Wight. Mr. JAMES NEWMAN, Architect.  
HAYDEN (accepted) . . . £74 0 0

**STOCKTON.**

For Building House near Eggescliffe, Stockton. Mr. JOHN RODHAM, Surveyor and Architect.  
R. & W. JOHNSON, Yarm (accepted) . . . £208 7 0  
Lowest of nine Tenders.

**TALGARTH.**

For Building Three Houses and Shops, Talgarth.  
Davies & Samuel, Talgarth . . . £1,565 10 0  
JENKINS, Brecon (accepted) . . . 956 0 0  
Pritchard, Llangorse . . . 880 10 6

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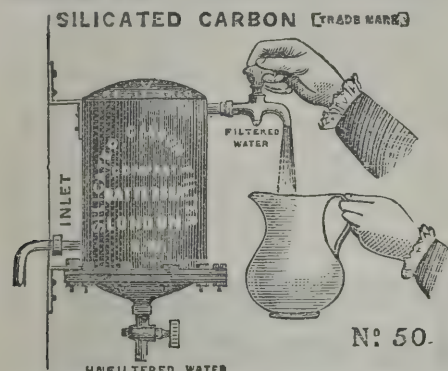
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12 Elm Street, Gray's Inn Road, W.C.

**SWINDON.**

For Completion of Two Houses in Dixon Street, Gilbert's  
Hill, New Swindon, for Messrs. Baily & Gilbert, the  
Foundations and a portion of the Walls being already  
built. Mr. WILLIAM DREW, Architect, Swindon.  
Phillips . . . £485 0 0  
Barrett . . . 470 10 0  
Wiltshire . . . 462 0 0  
KENT (accepted) . . . 435 0 0

**UPTON PARK.**

For Erection of Three Houses and Shops at Upton Park,  
Essex, for Messrs. Hopwood & Son. Mr. JOHN  
HUDSON, Architect, 80 Leman Street, E. Quantities  
by Mr. C. Stanger.  
Gladding . . . £2,780 0 0  
Eaton & Co. . . 2,749 0 0  
Counsell Bros. . . 2,684 2 1  
Outhwaite & Son . . . 2,635 0 0  
Little . . . 2,568 0 0  
Hearle & Son . . . 2,593 0 0  
Taylor . . . 2,359 0 0  
J. & H. Cocks . . . 2,348 0 0  
BRICKELL (accepted) . . . 2,115 0 0  
All of London.

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Supply direct from their own Quarries,

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**GRUNDY'S PATENT  
WARM-AIR  
VENTILATING FIRE GRATE.**

The novelty, superiority, and advantage of this patent  
consist in the heating surface being greater than any  
other Fire-grate introduced to the public. It is very  
simple in construction, and is made in the form of a Stove,  
the back of which is semicircular in shape, with gills  
behind and smoke-nozzle on top, all cast in one piece.  
The same can be attached to any design of a Register or  
Stove front. It is very suitable for schools, class-rooms,  
waiting-rooms, hospitals, offices, dormitories, and dwelling-  
houses, from the cottage to the mansion. Design and  
specification post free on application.

**TESTIMONIALS.**

"9 Victoria Chambers, Westminster, S.W.

"June 10, 1884.

"SIR,—I have much pleasure in testifying to the  
efficiency of your patent Warm-Air Fire Grate. It has  
been very successful, and given every satisfaction where I  
have used it.

"Yours, &c.

"JAMES WEIR, F.R.I.B.A.

"To Mr. Grundy."

"Baptist Chapel, Clapham Common, London. Richard  
Webb, Pastor, 10 Grafton Square.

"February 15, 1884.

"DEAR MR. GRUNDY,—I have pleasure in testifying to the  
excellency and efficiency of your patent Fire-Grate. It is  
the most charming invention for heating a large room I  
have ever known. I shall have pleasure in showing it to  
anyone who wish to have their schools or rooms pleasantly  
and efficiently heated."

From James Garry, Esq., Architect, West Hartlepool,  
July 1884.

"DEAR SIR,—I have very great pleasure in stating that  
the first stove, or patent warm-air ventilating fire grate,  
adopted by me in school at Seaton, and a second in a  
Cocoa Palace, have given such satisfaction that I now  
order eleven to be inserted in New Upper Grade Schools  
in course of erection at West Hartlepool. They are the most  
economical, efficient, and easily managed stove at present  
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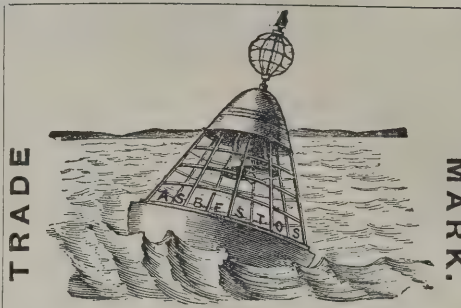
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# The Architect.

## THE CONTRAST BETWEEN CLASSIC AND GOTHIC ARCHITECTURE.



THE exceptional force of the address delivered at the Social Science Congress at Birmingham from the chair of the Department of the Arts would be deemed a sufficient reason, we have no doubt, for our commenting upon it a second time, even if the subject we now desire to take up were not of more than ordinary importance at the moment, namely, the practical contrast between Classic architecture coming into fashion and Gothic going out. Mr. BERESFORD-HOPE, justifying to the full the estimate of his position which we offered last week—the last of the more learned and accomplished representatives of the principle of Gothic art pure and simple—recalls our attention to the “Battle of the Styles” with all his old combativeness, as “a conflict of wonderful persistence, wonderful acrimony, and wonderful interest” not by any means yet ended, in which he has “long consistently and strongly taken his side with the advocates of Gothic,” and, in a word, still maintains his attitude. And so confidently does he carry himself that when he makes mention of the old sentimental arguments that Gothic is the “Christian” style and the “National” style of our country, it is only to lay them aside for the occasion and trust to criticism alone; he is prepared “to make a good one-handed fight” for the style of his predilection by consenting to tie up his better hand and confine himself to the inferior weapon of a purely architectural consideration of artistic and structural composition. In adopting this courageous if not arrogant course, it is not to be expected that an amateur would be able to deal with the subject exhaustively; but we may at once award to Mr. HOPE all the credit of being able to suggest to the mind of the practical professional expert the true lines on which to conduct the inquiry as a critical study on the highest ground.

Classical architecture, says Mr. HOPE, is most characteristically and academically exemplified in the works of the Greeks, such as the Parthenon. It was absolutely and without compromise a style of columns and entablature—post and lintel. The Romans continued this; but with a difference; they introduced the arch. Once admitted into design, this new principle gradually acquired the ascendancy, until, in such an edifice as the Colosseum, the old Greek trabeation or lintel-building was virtually abandoned in favour of the new Roman arcuation or arch-building. He will not go so far as to speak of the Colosseum as a Romanesque design; but, contrasting it with the Parthenon, he seems to be not altogether unwilling to recognise in it the equivalent of Gothic; “the art principles of the two buildings are not *different*, they are *hostile*.” The Romans, appreciating the structural element of the arch at its true value, as “a practical gain which would be feebly described as invaluable,” made it their artistic business “to marry the arch to the ornamentation which they had received from trabeated art.” “In this fight of centuries the arch at last prevailed,” and in the due course of development there appeared “the round arch in Romanesque, the pointed arch in Gothic.” The “victorious arch,” we are left to understand, thus became the one great future principle for the development of all the world’s architectural art; the preliminary lintel-building of the Greeks (and Egyptians) had died out and disappeared for ever; it is useless, therefore, to talk of Neo-Classic, which could only mean revived Greek trabeation; the “Gothic method” has taken permanent possession of the art, and modern Classic is but a pedantic sham. Let us at once observe that this, so far as it goes, is sound criticism, and well worthy of consideration, whether the conclusions are to be right or wrong.

The Flavian Amphitheatre, or Colosseum, as every architectural student ought to know, clearly occupies the position which Mr. HOPE assigns to it. In a certain sense it is the most notable historical building in the world. It exhibits the complete ascendancy of arch-building under the Romans; and in that way represents the close of the Roman style. Out of it

came, so to speak, if not the first arcuated Basilica-building of the Christians, certainly their eventual Romanesque, the Byzantine of the eastern church, and the pointed mediæval or Gothic of the western. There need not be any dispute about this substantially. But this is not all. On the fall of mediæval Christian architecture, and the rise of the modern European or Italian, the Renaissance architects began where the Romans had left off; they began at the Colosseum. In other words, what we call Classic architecture was overthrown as part of the overthrow of the Roman civilisation; it lay in abeyance for more than a thousand years while the Gothic Christian civilisation lasted; and on the fall of this in its turn, and the resuscitation of the dormant but not dead system of the Romans, it naturally revived as part thereof, and calmly resumed its career at the point where it had been suspended.

The Flavian Amphitheatre (as regards of course its external wall design) is to be critically described as a composition in four storeys, each storey in succession, except the topmost one, being structurally a continuous arcade, and superficially an attached colonnade with the structural arches occupying the intercolumniations; the topmost storey also being a superficial attached colonnade, but with the interspaces plain. The peculiarity of the columnar design, which makes it characteristic of the close of the Roman style, is the circumstance that the columns and entablatures are all built up of small stones. The composition so far is a counterfeit, and indeed would not even stand alone. Trabeated or columnar architecture is the architecture of large stones; arcuated is that of small stones. In supreme Classic building, not only the architraves (lintels), but the columns, ought to be monoliths; in supreme Gothic, the smaller the stones the more emphatic the character. The colonnades of the Colosseum, therefore, are designed on the lines of large-stone Classic and built on the principles of small-stone Gothic. That they are “attached,” or merely built into or with the wall by way of surface ornamentation, is incidental to this mode of treatment. The Roman method, therefore, had in the Colosseum reached completion of its kind; that grand Classic feature the “Order” was made superficial and decorative without being embarrassed by substantial considerations, and that invaluable constructive feature the arch was fully utilised without involving the artistic design in that poverty which at the time would have been the inevitable result. This description of the case, we need scarcely say, does not imply either approval or disapproval of the principles developed; Classicists and Gothicists, we hope, will agree that this is the Roman method, and there we leave it.

Turning now to the time when in the course of destiny architectural art amongst the rest was to revert to the Roman method, what do we find? The process of revival took place in Italy as matter of course; no other country was ripe for it; and no sooner were PALLADIO and others able to assume the character of mature Neo-Classic architects that the attached colonnade, with the arcade in the interspaces, all built of small stones, became the typical condition of their method; and, however far the ingenuity of ambitious originators might go in the endeavour to accomplish novelty of composition, this type remained supreme, and the Renaissance in architecture, as we have before put the case, was nothing else than a resumption of the Roman method. We need scarcely go on to say that, from that time to the present, this so-called Classic style has reigned throughout Europe, progressing in various countries in various forms, but always in the same direction. That the method has developed innumerable weaknesses, blemishes, and absurdities cannot be denied; and it may perhaps be admitted by its best friends that in the most pernicious article of sham more especially, modern Classicism—more and more inappropriately so called—has exercised the perverted genius of architects, even of the best, to a degree truly astonishing.

This last remark will remind the reader that it is the boast of the Gothic method that counterfeit design is expressly discountenanced. Mr. HOPE does not forget—nor ought he to forget—to touch proudly upon this fact. The Roman method, reaching its culmination in such buildings as the Flavian Amphitheatre, was a method of counterfeit superficiality; the Renaissance resumed this as a leading principle; the modern European has everywhere maintained and continued it. “Time would fail me,” says Mr. HOPE, “to catalogue all the clumsy contrivances which are necessities in Classical composition, and which, except by extreme blundering, can never occur in Gothic.” We should prefer to speak here of the clumsy con-



trivances as being, not "necessities in Classical composition," but unnecessary practices prevalent in modern Classic; and, as regards the assertion that, except by great blundering, such misadventures "can never occur" in Gothic, we should again prefer to say they need not, and ought not, although they much too frequently do. The fact is that the Gothic method, when in supremely good hands, may produce, no doubt, perfect work, but we all know that in bad hands the application of it is quite as difficult as in the case of Classic. Mr. HOPE knows this as well as any one; he has learnt it by exasperating experience, and his language admits as much. Indeed, he will not pronounce us to be far wrong if we say that sham Gothic is much more odious than sham Classic, for many reasons not easily explained but keenly felt by the critic. Perhaps the chief reason may be that Classic, so called, has here the miserable advantage of recognising the principle—for the sake, as Mr. HOPE says, of "symmetry"—whereas Gothic, being in no such bonds, must in a manner go flagrantly out of its way to seek the counterfeits. But be this as it may.

We are obliged to Mr. BERESFORD-HOPE for so plainly and so courageously reopening just now that always interesting and profitable question the Battle of the Styles, taken in its true critical aspect. Struggling designers of the mediocre class must be permitted to conduct this controversy as a mere strife for ascendancy in business; but more philosophic minds regard it in quite a different light. History furnishes us with two great artistic principles in architecture, strangely inharmonious, but equally sound. It will be a long time yet before we shall cease to find food for reflection in their contrast; indeed, up to the present time there are but very few of us who can appreciate the contrast at all with true artistic philosophy.

#### HOLIDAY PAPERS.—LIMBURG AND THE LAHN.

(Concluded from page 195.)

LIMBURG Cathedral has hardly received as much notice from painters as its singularly solemn and dignified exterior and remarkable situation would seem to irresistibly attract. But at least one interesting etched plate has been made from it. To some, perhaps, the old church presented more charm before the restoration in 1877 swept away the incongruous buildings that had gradually encumbered the base, removed the curious wooden gallery that connected the western towers, restored the shafts and mouldings, stopped with dark mortar and cleaned the weather-worn surfaces. Inside, again, a clean sweep was made of all the heterogeneous ornaments and furniture which gradually accumulate in places of Catholic worship that are not interfered with; details which, though tasteless and discordant in themselves, often produce a highly picturesque effect of colour and chiaro-oscuro and quaint forms. Many an old cathedral and church in Germany has, in the eyes of artists, been ruined for pictorial purposes when the careful restorer had brought it into as near a semblance of its first estate as he could fondly, and most often vainly, devise. Bamberg is a case in point, and Limburg may furnish another. Personally we have nothing to say against the exterior restoration of Limburg, which now holds together as a complete and coherently harmonious example of the Romanesque-Gothic transition at its finest point. The severity and solidity of the early basilica is passing, not abruptly, but by the most beautiful growth, into the richness and elegance of the Pointed style. What an *ensemble* it is with its seven towers, two at the west, two on each transept, and one at the cross on an octagon drum; its lofty aisles, with their distinct roofing; its threefold stages of double triforium and clerestory, each distinct on the exterior, with deeply-recessed openings and elegant shafts, becoming in the upper storey of choir and transepts an arcaded gallery, which in the apse is doubled! Set on the very edge of the precipitous rock that looks not more solemnly grey and enduring than itself, above the smooth river that throws its image back in tremulous reflections, venerable Limburg *Dom* is almost unique for romantic austerity and dignity of effect. It impresses one as a strain of solemn vocal music, a *chorale* of SEBASTIAN BACH, or a *motett* of PALESTRINA.

It is another matter when one enters within, for here, however authentic may be the restorations from a logical point of view, logic in art is again proved a mistake. Nothing can destroy the noble proportions, the height of the narrow nave, the low but wide aisles, the simplicity of the massive square

piers with their soaring shafts clustered in three at each bay, the harmonious gradation of the double triforium arcading, the apse with its deep chapels, the rich treatment of the transept walls, the noble height of the central dome, the pavement of sepulchral slabs. But the removal of the choir screen and stalls into the apse, together with the position of the high altar, replaced at the cross by a low table, and the clearing away of all superfluous furniture, has left the interior very bare. In part to remedy this has been placed beneath the dome the remarkable memorial of the founder of the first basilica, CONRAD KURZIBOLD—a long-throated spare figure, holding his sword with his right hand, and clasping the chain round his throat with the left—lying in a sort of decorated marble coffin, supported by four quaint little images of monks and two beasts. The *Sacramentshaus*, a dainty piece of early Gothic, all pinnacles and figures, in grey stone, spoilt by having been painted over with oil colour, is placed against a pillar in the nave. The famous font, or *Taufstein*, one of the richest and quaintest examples of the model used in the twelfth and thirteenth centuries, is taken from the south transept and placed beneath the north-west tower. It is an eight-sided basin of red sandstone, resting on a four-sided socket, decorated at the angles with the heads of creatures. Eight pillars support the sides; on each stands a grotesque human draped figure, bending askew, as supporter to the rim, round which run rough foliations, different in each division. Two of the grotesque figures are supposed to represent CHRIST and the Baptist; the others to symbolise the vices renounced in baptism.

These ancient things, with the choir screen simply arcaded, and filled in the panels with ancient paintings badly restored, are all that is left of the old church furniture, the pulpit being transferred elsewhere, and the ancient high altar vanished. The objects in goldsmith's work and reliques are of course in the treasury—a certain priceless Byzantine reliquary with enamels, and the enamelled sheath made for a portion of St. PETER's staff are well known to the learned in such art. But the restoration of the Limburg *Dom* interior did not stop at clearance or clearing; it undertook decoration, and consequently, on the evidence of what was left of fresco and tinting, the greater part of the surface has been picked out and covered with polychrome that no claim to correct tradition can make otherwise than crude and jarring. The shafts on the main piers of the nave are coloured grey, with the courses picked out in red. The vault ribs are in checker, blue, red, and yellow, divided by white lines; the capitals are gilt, with red and blue lines on the abacus. Archaic figures of the Apostles, half-length, with mottoes and architectural background, and subordinate figures either side, fill in the tympanums of the lower triforium arches. The dome contains symbolic creatures and archangels; over the triumphal arch is CHRIST the Judge, St. GEORGE, and St. NICOLAS. All the mouldings are picked out; the rough traces of fresco on the transept walls—CHRIST on the Cross, and SAMSON uprooting a tree—have been retouched or over-painted. Elsewhere traces have been too faint to follow, but in the galleries several figures of angels and saints have given sufficient ground for repainting. In the choir and apse fortunately no trace of painting was found. One must use the word fortunately, for without meaning to indict the architect, Herr JUNKER, or the artists, Herren WITKOF, father and son, it must be allowed that the colour scheme of decoration is a failure, and the archaic art of the figure compositions is meagre and repulsive. Painting, even as a wholly subordinate art, was far behind architecture, and the decorative taste of the Romanesque fails directly you come upon the application of coloured ornament. However, again we must repeat that, fortunately, the traces of the old fresco work saved Limburg from, at least, two schemes which would have been yet more fatal to the effect of its austere noble interior. The cathedral is also the parish church here, otherwise things might look more forlorn than they do, and the cathedral be reduced to a mere monument, for the bishopric of Limburg, as may be remembered, was a bone of contention in the late strife between Prussia and the Papacy, and the see is practically vacant. Thus none of the pomp and circumstance and the crowded congregations of the high Catholic ritual give to the stately *Dom* its rightful aspect and full use.

The town of Limburg has suffered from the causes that have affected most of the places hereabouts; but a good deal that is picturesque remains in the frontage or detail of old buildings scattered here and there throughout the irregular



levels—bits of Gothic or later stone ornament, handsome timber work, quaint roofage, and so on. The nobly-spanned and massively-buttressed stone bridge forms a pictorial *ensemble* with the cathedral, the meadows and trees of the opposite bank, and the shining levels of the river, broken up in the foreground by marshy ground full of wild flowers and ridges of waving grass. The place seems little frequented, and student or painter, we can undertake to guarantee, may find comfortable quarters, peaceful leisure, and profitable occupation in old Limburg on the Lahn.

### MR. BERESFORD-HOPE ON SIR GILBERT SCOTT.

[BY A CORRESPONDENT.]

THERE was a time, and not so long ago, when to have incurred the imputation of "Apostacy from True Principles" was, according to certain judges, to place oneself outside the pale of artistic honour. Everyone who aspired to be considered an architect was expected not only to cry out with old JONATHAN OLDBUCK, "Gothic! Gothic! I'll go to the death upon it," but to act up to the words, and to endure the slow martyrdom of the unemployed rather than accept a commission for a building that was to be in any way Classic and corrupt. Some became confessors for a time and recanted when it was too late, a few were faithful to the end; there were others who did change but were ashamed, and felt occasionally touches of sentimental remorse. To amateurs who contemplated architectural work from comfortable arm-chairs in college rooms, or in the dulness of a country parsonage, the Battle of the Styles offered a delightful excitement. Like the worthy Spaniards who implored the Jews and other victims of the Inquisition not to spoil a holiday by showing signs of repentance on the way to the stake, our lay and clerical ecclesiologists persuaded enthusiastic youths that it was more praiseworthy to sacrifice prospects in life than to abide by canons which were not formulated by the Cambridge Camden Society. When the late Sir GILBERT SCOTT agreed to build Government offices in an Italian style, it was like a confession of a captain that his cause was not worth fighting for, and for a time at least the Battle of the Styles was at an end. But the men who had the pleasure of looking on without enduring any of the festering wounds of the field were disappointed at the surrender, and SCOTT had for the remainder of his life to suffer much from their gibes. That his offence has not been forgotten by them is evident from the way in which the offices have been introduced in Mr. BERESFORD-HOPE's address at Birmingham, as if they were the most notorious example in all history of immorality of construction and immorality of composition. After insisting upon the duty of the rigid observance of the double moralities of architectural art, the morality of construction and the morality of composition, the President of the Art Section continued:—

Talking in this connection, I must say that, in my opinion, a more severe blow was dealt to the credit of Gothic architects by the discovery that, with all the pains which the chief of Gothic artists had taken to prove how gracefully he could dance in the fetters of that alien style which official prejudice had forced upon him, he has yet shown himself so strangely unappreciative of the responsibility which rests on every architect to master, and so bestow his personal care upon the sanitation of his building, than by the apparent readiness with which he ever assumed those fetters, &c.

The construction of the sentence is not over clear, arising probably from the indignation of the writer at the time of its composition, but it is evident that Mr. BERESFORD-HOPE considers that the Home and Colonial Offices are as badly drained as they are falsely designed, because they were the work of a man who was an apostate. "The architect who works for truth and not for applause is bound to see that he does not purchase an outside artistic triumph by playing with those issues of life and death which follow on the neglect of nature's sanitary laws," or, in other words, do not follow SCOTT's example. It might be going too far to say that Mr. BERESFORD-HOPE is the last man who has a right to speak in this way, but one thing is certain, that in his reference to SCOTT at Birmingham he displayed an inconsistency that is remarkable. For it must not be forgotten that in 1877, when the defects in the Government

offices were being scrutinised by a Parliamentary Committee, the member who took the part of counsel for Sir GILBERT SCOTT was Mr. BERESFORD-HOPE. It is a counsel's office, knowing his client's own representation of the case, to put questions which shall make it appear in its most favourable aspect. This was done by Mr. BERESFORD-HOPE. We find him asking such questions as the following:—"Did any special instance of tampering with the drainage on the part of an outside authority come under your notice?" "The complaint, which has been very well known and widely spread, and which brought your new building into much discredit, was, you believe, the act neither of yourself nor of the Office of Works, so far as you suppose?" "In the course of your underground investigations did you find any instance of carelessness and stupidity on the part of the people who were actually occupying the building, and which might account for some of this kind of inconvenience?" "You consider that gentlemen of the architectural profession were made the scapegoats for the office?" These questions of themselves suggest the answers given by Sir GILBERT SCOTT to explain what did occur in Parliament Street. We do not profess to know what is the Parliamentary etiquette in cases of the kind, but it can be said with confidence that the humblest barrister would not at one time let it be supposed that his client was a scapegoat, and afterwards declare that he was guilty.

If the offices had been Gothic instead of Classic we should have heard quite as much about the bad drainage. SCOTT was not, after all, so neglectful or so incompetent in his arrangements. By the advice of Captain GALTON the drains were placed in a sub-basement, where they could be always accessible. Any leakage was therefore perceptible, and was duly reported to the Office of Works. The building was occupied before it had been completed, and it is not surprising that occasionally a joint was opened or a pipe was cracked. It was afterwards found that, in consequence of the accumulation of street rubbish in a drain outside the building, the drains from the offices could not act. Government clerks are subject to occasional panics in respect of drainage; and this is excusable if we consider the condition of the houses which have been used as offices. But it is not fair to the architect and builders of the Home and Colonial Office to magnify the shortcomings into crimes. The truth of the case was expressed by one of the members of the Parliamentary Committee when he said:—"If there are any errors or difficulties as regards the construction and detail of the interior of those buildings, they must be shared by those who did not know what they wanted themselves."

### THE STATE AND ART.\*

IN the remarks on the relations between the State and Art in France, which appeared in a late number, we endeavoured to explain that the prominence given to the Prix de Rome was not advantageous to French art. So much attention has to be given to the means by which the medal may be gained, there is little left for other matters. This is what was meant by the late VIOLETT LE DUC, when he said that the gradual disappearance of competent architects in the French provinces is to be attributed in a great measure to the system adopted in the Ecole des Beaux-Arts, by which more pains are taken to present a laureate at the Villa de Medici than to cultivate a body of useful artists. Of late years the school has been enriched by a large staff of lecturers, but the principal education is still to be derived in the *ateliers* in connection with it. They are presided over by renowned artists, but the education of the students is mainly derived through that "atmosphere of floating knowledge" which, according to Sir JOSHUA REYNOLDS, is the best source of artistic education. As the students are the teachers, they are likewise often enabled to foretell who is to be the winner of the Prix, and probably their judgments are the most impartial. But as French artists are mortals, it has happened that deserving students have been sacrificed, and the best work does not always win. An example of this kind is to be found in the popular life of HIPPOLYTE FLANDRIN, the painter. He was a pupil of INGRES, and on that account was once kept out of the final competition by the adherents of

\* "Architecture and Public Buildings: their Relation to School, Academy, and State in Paris and London." By William H. White, Architect. P. S. King & Son.



M. GROS. In the year following he was allowed to compete, and the artists as well as the public proclaimed his work to be the best; everybody told him he was sure of the prize, but FLANDRIN did not believe them, because, as he wrote, "the cabal is horribly active." A contest of principles was carried on over his picture, and he was surprised when he found that he was the winner. Yet afterwards FLANDRIN was one of the fiercest opponents to any reform of the school. What has happened once may be repeated, and hence it is that the prizeman is not always the most promising of the students, and that in the list of French artists names are to be found having "Prix de Rome" attached which do not denote distinguished men.

There is a tacit understanding that the painters and sculptors, after their return from Italy, are to be helped by public commissions. An architect, according to Mr. WHITE, has, among other privileges, "a preferential right to be admitted an assistant at the sittings of the Conseil Général des Bâtimens Civils—a council which advises the French First Commissioner in all matters relating to civil buildings." The Prefect of the Seine, the Prefect of the Police, the Minister of Public Worship, and the Minister of Public Instruction and Fine Arts have also their councils, and among the members are architects who are Academicians and others who have enjoyed the Prix de Rome. The returned prizeman, although he may be thirty years of age, has not necessarily any knowledge of construction; and he is expected, should he be ambitious of employment under the State, to become a subordinate to some architect who has been entrusted with Government works. The Grand Prix, in fact, gives admission to the magic circle in which good commissions fall, and once there a man needs only time and tact to secure his share.

It is not, however, the insuring of a career to several architects that the State has in view. France gains a body of men in every generation who are fitted to conserve those qualities which go to the making of a style. An architect who has studied for two years in Rome and two years in other parts of Italy or in Greece, who has been associated with academicians, may show in his work much of that stiffness which is inherent in everything official; but it is never likely to be freakish or undignified. He knows that his slightest work will be more keenly scrutinised than the larger works of other men, and he is compelled to be careful. A fierce light beats on him, and it is soon discovered whether the State has made a profitable investment in undertaking his education. What becomes of the unsuccessful competitors in the schools is from this point of view of little moment. They may be disheartened, and some may never rise above assistants; but so long as the end is attained of creating a race who will carry on the tradition of art, what matters the repining of the majority? France, like Nature, is careful of the type, careless of the single lives. The travelling studentship of our Royal Academy has some faint resemblance to the Prix de Rome, but the holders obtain no recognition on their return; there are no offices to bring the students together, and thus to obtain the advantages which should arise to the art from uniformity in training among a number of men.

One of those advantages is a belief in the existence of a style, or, in other words, that there is one way of doing work which is better than others. The style may be called academic or old-fashioned or unsuitable, but still it is admitted that there are laws for it which must be recognised, and that experts are the best fitted for the purpose. Hence in Paris when there is a great competition like that for the Opera House, the judges appointed to make the award were, as Mr. WHITE says, "chosen exclusively from the highest ranks of the architects." In England there is nothing sufficiently definite to convince the public in general that there is a style. An ordinary Englishman regards architecture as little more than a collection of odds and ends which can be combined with plain work, and it is of not much importance to him whether there are many or few of them. Of the two, he prefers the few for public buildings. Mr. AYRTON was aware of this national indifference to style, and acted upon it. So long as he was able to say he was cutting down ornament the majority approved of his energy, and had not the slightest misgiving that he was wrong when he spoke of improvement of the designs through his operations. If he had confined his exploits to architecture he might have continued in office. When Mr. WHITE says that a First Commissioner of Works is in reality "a practitioner engaged in building operations

throughout England and Scotland, and he monopolises those architectural works which, in Continental cities, form the prizes of professional eminence," he is helping to make the office popular with the public. The surveyors may have charge of an enormous amount of work, but they are supposed to get it done cheaply, and the public are satisfied. For the same reason the employment of Royal Engineers always finds approval. It is only when a professional architect is entrusted with a public building that there is grumbling. "The prevalent desire for improvements," which Mr. WHITE says he observed, and which was ignored by the authorities, can hardly mean works of architecture. SCOTT, STREET, and BARRY were engaged in a struggle with Government officials on matters which can be termed improvements; but they had all to succumb because they stood without public support.

How long this state of affairs can continue it is impossible to foretell; but until the public are educated to believe in the importance of architecture and are proud of their public buildings, we must expect that Commissioners of Works will think mainly of the objections which can be raised against their administration by advocates of economy. We have heard surveyors complain of the influences by which the features which give character to architecture had to be sacrificed; and generally they existed outside the department. Under those circumstances, what is a First Commissioner to do? Mr. WHITE would say—imitate the example of COLBERT, and form a Council for Buildings, which should meet twice a week at the Minister's house. But there is a difference between the condition of things in England in the nineteenth century and in France in February 1663. The days are gone when an architect's journey was "one scene of triumphant progress, worthy of the ambassador of a great State or a victorious general." That was BERNINI's experience, who was received outside Paris by COLBERT on the part of LOUIS XIV. An architect nowadays is regarded very differently. While, therefore, we are grateful to Mr. WHITE for his skill and courage in representing the condition of English architecture in our time, especially in connection with public works, we believe that he is over-sanguine in supposing that the country is eager for any assimilation with the practice in France. Until the English public is equally well educated in art with the French public, there is an opportunity for Ayrtonism.

## STUDIES OF LONDON CHURCHES.

[BY A CORRESPONDENT.]

(Continued from page 183.)

WHAT an alteration has been made in *St. Sepulchre's Church*, Holborn, by the removal of the galleries a few years since! Other extensive works were also undertaken at the same time. On entering the church the effective feature of the spacious vestibule at the west end well deserves notice, divided off by means of a handsome glazed oak screen from a second vestibule, which occupies about two of the western bays. This in turn is separated from the nave by an oak screen with swing doors. The building has been reseated with open benches, which would be considered too high for a modern church, but are suited to the style of this structure; some of the old oak has been reused. The ends are ornamented with small semicircular panels carried on little shafts, a treatment rather wanting in "breadth," as the eye seems to demand something of a more substantial style. The organ chamber is in an unusual position, opening out from the north aisle a little way from the west end. There is a handsome organ-case gilded; the pipes also gilded. The front is set back from the aisle wall, leaving space for the key-board, &c., and for an elaborate stone screen of Renaissance character, having marble pillars, moulded capitals, and arches. In the centre it is surmounted by a "broken" pediment. This gap contains a floriated cross, of rather too small dimensions; beneath are circular medallions containing heads. One wonders why it was necessary to have such a solid-looking screen to conceal (but in vain) the plain oak impost of an organ-case. An oak screen of simple character would have been more in harmony with the organ-case. The passages of the body of the church are well paved with Godwin's encaustic tiles. But the chancel has a Roman mosaic pavement in an effective and severely-designed pattern. Beautiful as is the material of the revived Mediæval encaustic tile, there is a refinement in mosaic which no tiles can ever reach. The reintroduction of the mosaic was a happy thought. The writer has been informed that the floor of the nave of *St. Sepulchre's* was lowered 18 inches during the late alterations, so as to get a raised floor for the chancel. It is a question whether this is any im-



provement, for the piers of the nave arcade now look rather stilted on their tall pedestals. The fact of the galleries having been removed is almost apparent even to those who never saw the church before the recent works. Is this right? The whole church, somehow, looks too high. Though the sweeping away of the galleries was doubtless a good thing in many ways, it cannot be called an unqualified success. The nave aisle windows have been transformed into the Perpendicular style; but the cathedral glazing is ineffective, as the patterns are too large in scale and monotonous, every window in the north and south aisles being of the same design. To keep out the noise of the traffic, plate-glass has been inserted inside the other glass. It is almost possible to regret the invention of cathedral rolled glass when it is misapplied. What a pleasure to see so much attention bestowed on a City church, considering the ruthless destruction some of them have suffered, and others may suffer unless a strong protest is made. Most of us probably care a little for the verdict of our children and children's children. Yet the finger of scorn will surely be hereafter pointed at those men who, in the nineteenth century, threw to the four winds of Heaven all feelings and scruples as to the sanctity of ground consecrated not only by the successors of the Apostles, but by the thousands of acts of worship which have taken place there. On archæological and architectural grounds, too, by reason of the natural regard for the resting-places of the dead—by all these and other considerations let us turn a deaf ear to excuses for mere "expediency." Some of the advocates for the preservation of City churches have rather uncharitably and sweepingly called the advocates of City church removals men of low commercial instincts and worshippers of Mammon. On the other hand, some of the advocates for demolition have sadly been misled by their mistaken lights, or rather have been blinded by a glamour. Posterity will not view the matter "as through a glass darkly," but perceive the wrong of the case as clear as day, regarding it calmly and judiciously. It should be added (to refer for one moment more to St. Sepulchre's) that two pulpit-like structures have been put up, one at each end of the chancel seats, following the same arrangement as at St. Augustine's, Stepney.

In the spire of *St. Mary Matfelon*, the parish church of Whitechapel, the architect, Mr. E. C. Lee, has not, to the writer's mind, been quite so successful as in the body of the building. The octagonal angle turrets, pyramidal-topped, do not spring out high enough from the base of the spire, and consequently when viewed from a distance the impression is almost given that the spire is broached. The tracery of the spire lights is rather peculiar and the ridge cresting seems superfluous. Why should so infinitesimal a length of ridge, particularly in such a minor detail, be emphasised? The long, deep, louver boards to the belfry windows, cutting into the splays of the jambs, as in continental examples, are not superior, but rather inferior, to the English fashion of setting them further back. There seems, too, no particular advantage or beauty in the small vertical piece at the base of the louver board, unless it be that it prevents the rain being blown in during a gale of wind. On the other hand, the belfry windows of many Mediæval towers in England have unfortunately been deprived, during the dead periods of ecclesiastical architecture, of their pristine louveres. In their place rude boards, pierced with auger holes at intervals, or shallow louveres, resembling Venetian blinds, have been inserted. Nothing can be more detrimental to the appearance of a well-designed tower than such misplaced detail, as the belfry windows ought to be among the most telling features of the composition. The body of this church, rebuilt after the disastrous fire, must be commented upon hereafter.

*St. Saviour's Church*, Shepherd's Bush, was consecrated early in 1880, and is the work of Mr. Blomfield, but scarcely up to his standard. In plan it comprises nave and lean-to aisle on the north, the south aisle being irregular in form owing to the awkward boundary-line of the site on that side. Consequently, the westernmost end of the aisle consists of a twin gable having large windows. The greater part of the remainder of the aisle has a parapet and blank, unpierced wall, as an adjoining wretched little stable prevented any other treatment. There are dormer windows. The roof is carried by posts, so that the south aisle has rather a peculiar effect with so much timber in it, until one walks outside and sees how the architect has got over difficulties and made a comparatively picturesque composition of what in incompetent hands would have been an eyesore. The ready manner of turning blemishes almost into beauties is one of those gifts which marks the true architect, and those who are imbued with the spirit of the inimitable Mediæval men come well through the ordeal. At the north-west angle of the church is an octagonal tower, not yet completed. The chancel also has to be built, and the whole of the east end has a temporary wall. The material employed is the ordinary grey stock bricks, with red bands, and is not plastered internally. There are five arches in the nave arcade, the central three of equal width, the westernmost one not so wide, and the easternmost one narrower still. But the couplet clerestory windows

are not divided out equally, and consequently the windows are set irrespective of the nave arches; piers do not come over piers, or openings over openings. The principals of the roof follow the centres of the windows, so that the strain of the roof in some cases comes over the arches. But as there is the whole height of the clerestory between, the weight probably gets pretty well distributed, and possibly for this reason the architect has put collars to each rafter, planted high up in the construction. Two tie-beams occur to each truss, bolted through and let in on the principal rafter about  $\frac{3}{4}$ -inch; the tie-beam is placed higher than the plate level. The purlines are set vertically, strutted up to the principals by means of curved braces under them. The roof of the north aisle, which is of fair width, is of the same twin tie-beam construction. The principals to this aisle, by-the-by, are made so strong and elaborate as almost to do away with the notion that it is only a lean-to roof.

The very modest, unobtrusive-looking church of *All Saints*, on Putney Common, stands somewhat at a disadvantage on a bare space, with only a slight railing round it and no trees. Architecture can never despise the aid of Nature and the beauties with which she clothes its nakedness. Shrubs, plants, and flowers around a building always much improve the effect. All Saints is built of the ordinary stock bricks, with stone dressings; but it lacks red brick bands, or some other colour to brighten it up. The exterior of the church is in truth plain, almost commonplace. One is, therefore, agreeably surprised by the ornamental appearance of the interior. This is as it should be, and was doubtless the intention of the gifted architect, the late George Edmund Street. The bell-turret is set over the chancel, spire-like and octagonal in form. Gargoyles grin at each angle of the cornice to this turret, but do not form the outlets of any gutters. These representations of uncouth monsters seem scarcely appropriate to a modern church. The ideas of Mediæval Christianity are very charming to a certain extent; but the gaping mouth of hell, as sometimes represented, the buffoonery, or worse, of the carving to the misereres of stalls, and such like, do not seem desirable to revive at the present day. The external plinth to the building is of freestone, consisting of three chamfered stages, a valuable accessory, as it affords considerable dignity to the structure. The dressings of the doors and windows are of chamfered malm bricks. There is no clerestory, but the church has a nave and lean-to aisles of fair width. A space of about one foot occurs between the two roofs, the aisle, as almost invariably happens, being of flatter pitch than the nave. The vigour with which the chimney difficulty (in a church) has been grappled with and successfully surmounted is to be commended. There is a good wide bold projection, on which the chimney wall is carried to some height. If the shaft, instead of the broad chimney-breast, had been lofty and attenuated, the effect would have been very inferior. Turning to the interior, the nave roof has ornamental principals, panelled to the underside of the rafters, with moulded ribs; the panels formed with lath and plaster. The same treatment is adopted in the aisles. The chancel has a brick barrel vault with stone ribs; but the beautiful baptistery at the south-west angle of the nave is groined. There is no particular grace in the brick barrel vault beyond its monumental character. A wood-panelled ceiling is as effective and less costly, and can be decorated in colour whenever required to any extent, leaving the natural surface of the wood as the field, so to speak. With brick this cannot be; it must either be all brick, or brick banded with stone, or otherwise plastered all over. The westernmost bay of the nave has a narrower arch, and is kept free of seats—a very good arrangement, and one it is to be regretted is not more often adopted. The north porch is placed opposite this bay, and there is no west door. The vousoirs to the outer order of the nave, arches, &c., are alternately of red brick and stone, the inner orders being of stone entirely, a leaf happily taken out of the Italian Gothic book. There are stone labels round the arches and large recessed circular panels, also with labels, over each nave pier. The two-light windows to the aisle have a distinct inner order, carried on a detached shaft, occurring opposite the mullion. It need scarcely be said that the walls must be thick in order to carry out such an arrangement properly. The all-important advantage of thick, substantial walls is evidenced here, as well as in the aisle windows. Turning one's attention to the seats, it should be observed how the capping to the seat-backs returned on its own section appears over the bench-ends, a novel treatment which cannot be much admired. The ordinary plan of a bench-end the same height or higher than the seat-backs surely answers very well, thus forming a good stopping. The organ is divided, one portion being considerably bracketed out on the north side of the chancel, the other being on the south side of the south chancel aisle. There is no archway for the organ on the north side towards the church, but only a door from the vestry. The keyboard is placed so that the player sits facing north in the chancel aisle. There is a high iron chancel grille with gates. But one of the most beautiful features in the church has yet to be commented on. Would that there were more such! Instead of a reredos is a painted tryptich. The subject is from the twenty-first chapter of the Apocalypse, the angel with the golden reed showing St. John the heavenly Jerusalem coming down in the clouds—a



mystic theme which, if well treated, must always be very effective. The figure of the angel is exquisite, and the reverent attitude of St. John kneeling, with his hands uplifted, as if in deprecation of the honour accorded to him, is admirable. In the horizon appears the setting sun, while the heavenly Jerusalem is represented according to the beautiful description in the Sacred Word, rich with cupolas and towers. In the panels on either side of the central subject are depicted figures of archangels. A really good piece of painting such as this, religiously conceived, is vastly superior to the ordinary reredos with its hackneyed devices. Not but what a reredos can be very originally designed; but to do this, the architect must not be tied down too closely as respects the funds at his command. The whole of the triptych was designed by the late Mr. Street, the painting being from the pencil of the Mr. Spencer Stanhope. A happy contrivance has been pitched upon in this church for complying with the canon law as respects the Table of Commandments. These are executed in illuminated but legible letters, and enclosed in glazed oak frame of suitable character, surmounted by a cross. There can be no difficulty in finding a place for such a tablet anywhere towards the east end of a church without its occupying too prominent a position. The scale of All Saints is diminished, apparently, owing to its being built, as has been already said, on a wide open space of common, having nothing near to contrast with it. Architects should be careful in endeavouring to counteract to the best of their power such influences when they occur.

The church of *All Hallows*, Lombard Street, was not long since reopened, after the ceiling of the nave had been considerably altered by a top-light filled with white cathedral rolled glass. Probably in order to prevent this looking poor and out of character with the flat painted and carved ceiling, ornamental brass scroll-work has been fixed under it at a distance apparently of about 6 inches from the glass. Surely this metal-work obscures quite as much light as lead quarries would do, and has a too modern appearance, not in harmony with one of Wren's churches. If it be objected that lead is liable to the action of weather and wet, plate glass might have been put on the upper side of the lead lights with proper means for cleaning the space between. The nave ceiling is decorated in blue with gold stars, and circular medallions containing the heads of the four Evangelists. Other details of this church, with its grand reredos, designed by Wren, have been previously commented upon by the writer in the pages of *The Architect*, so it is unnecessary to expatiate further on them.

*St. Crispin*, Bermondsey, is a dignified-looking building of wide span and with a good clerestory, but rather fails in some of its details, as, for example (in the nave), owing to the poor-looking bases, piers, the arches to the windows, and the crude manner in which the shafts carrying the principals of the roof are corbelled out. This is also the case with the chancel arch. The nave roof is open-timbered, having tie-beams carried on bold brackets, commencing some way below the tie-beams, which rest on stone capitals corbelled out as above mentioned, just above the nave arcade. Having rather taken exception to some of the detail, it is pleasing now to turn to the other side of the picture and comment on some of the good features. The course of bricks set vertically at the level of the springing line of the aisle window arches has a good effect—ornamental without being costly. The internal reveal of the window at the west end of the nave is carried down to the floor level, giving space for a coil of hot-water pipes there. The soffit of the tie-beams is fluted and stopped where the bolts occur. This has a good effect, and does not weaken the tie-beams like a chamfer, though taking off any appearance of heaviness. The substantial-looking bracket arches are also a great improvement artistically and constructionally. The gas pendants, though bracketted out from the wall just above the points of the arches, are very well and naturally treated. Consequently, they look better than pendants as ordinarily contrived; in fact almost as well, and at the saving of much expense, as if they were suspended from the ceiling, which is the best way of all. It should be added that *St. Crispin's* is constructed of red brick with stone dressings.

The parish church of *St. Mary Abbots*, Kensington, is so well known that the writer will only make one or two remarks connected with certain details. The panels flanking the central one in the beautiful reredos contain the figures of the four Evangelists in mosaic, with their respective emblems placed before them. This appears to be the best and most sensible mode of representing these mysterious but venerable types, so curiously connected with the ancient prophecy of Ezekiel. It may be modern fastidiousness, but the writer must confess that he does not like to see the emblems in their pristine simplicity unaccompanied by the figures of the Evangelists, especially in a reredos, though he cannot but admire the beautiful Mediæval sculpture of these subjects in the noble abbot's barn at Glastonbury and many other places. The cross in the central panel is of rather an unusual design, being a plain Latin cross as regards its outline, but exquisitely carved with foliage in beautiful flowing lines. This is but another form of the

floriated cross—the glorified representation of that which was once a cross of shame. The only misfortune is that one does not see much of this elegant incised ornamentation at a distance, but only the rather too plain outline of the cross. The labels round the circular panels in the upper portion of the tower might be condemned by a strict architectural purist, on the ground that the label to the lower half of the circle is of no practical use, in fact does more harm than good when there is a hollow member in the label. But these projecting members give variety and shadow to the exterior of a building, and it is possible to strain arguments too far in respect to constructional propriety. The hollows alluded to can never be seen from below, and should be worked solid in the lower half of the circle or vesica, so as to harbour no water. The oak louvre boards, shaped at the lower ends, are superior in effect to slate, and even to stone louveres, as in time they tone down to such a soft silvery grey colour. There is a good contrivance at this church for opening and closing the clerestory windows without having the cords in a too conspicuous and inconvenient position. The cords are carried through the arcade walls and led down the rafters of the aisle roof on to the aisle walls. This is a less expensive way than that adopted at several other churches with clerestories, where a continuous rod with cranks, &c., worked from the corners of the building, on the ground floor, enables even a child to open and close or regulate the casements. Referring to the roof of the nave, much is said by some authorities as to the advisability of tie-rods or beams where there are lofty clerestories, or where the churches are of wide span. No doubt this is the cheapest way of constructing a safe roof. But the result can be attained by other means, as shown in this example.

(To be continued.)

### LABOURERS' COTTAGES IN IRELAND.

AN Act of Parliament was passed in August 1883 with the object of bettering the condition of agricultural labourers in Ireland by providing improved house accommodation for them. By it the local sanitary authority is, after certain formalities are accomplished, enabled to obtain a loan from the Treasury for the purchase of sites and erection of buildings. The money is to be repaid in twenty, twenty-five, thirty, or thirty-five years, and the annual instalments for 100*l.* for those periods vary from 7*l.* 0*s.* 8*d.* to 5*l.* 7*s.* 2*d.* If a cottage should cost 100*l.*, which it must if the expenses of investigation are counted, the local authority will have to pay 5*l.* 7*s.* 2*d.* for thirty-five years. But it is not anticipated that tenants can pay more than a shilling a week, and in consequence the deficit between 2*l.* 12*s.* and 5*l.* 7*s.* 2*d.* must fall upon ratepayers. There will also be a charge for repairs. It is not surprising that the poor law guardians are not enthusiastic in carrying out the provisions of the Act. In two out of the four provinces in Ireland, as there have been no petitions presented, the Act is a dead letter. The Committee who were appointed this year for the purpose of ascertaining whether any amendments to the Act are necessary have not completed their inquiry; but enough was said to suggest the difficulties which attend the least improvement of Irish properties.

The local authority is to take the initiative by asking the Local Government Board to hold an inquiry before an official inspector. After it has been held, the project is to be advertised. Next there is to be an application for a provisional order. Then there is to be an appeal to Parliament for confirmation of the order. All this circumlocution has to be got through before the guardians are in a position to execute the scheme, or, in other words, to tax themselves. Very few and very weary are the victors. It appears that only one union has as yet got as far as the application for a loan, and not one cottage has been commenced in all Ireland.

At the inquiry plans and specifications of the proposed cottages must be exhibited, which may be prepared by an architect or a builder. The Local Government Board desire to interfere as little as possible with the discretion of the sanitary authorities in regard to the designs, but the plans are to comply with the following conditions:—

1. The number of rooms must be sufficient to provide for the due separation of the sexes, and there should be a kitchen and at least two bedrooms in every house.
2. Every habitable room should have a height of not less than eight feet throughout, except in the case of a room constructed in the roof, when one-half of the area of the room should have a clear height of seven feet.
3. Each habitable room should have one or more windows of a total area of glass of at least one-twelfth of the floor space, and all bedrooms should be floored with boards or tiles; the ground floor should be raised not less than nine inches above the level of the external ground.
4. A proper privy should be constructed, in each case separate from the dwelling-house, and distant at least ten feet therefrom; the floor should be flagged or otherwise rendered impervious, and raised at least four inches over the adjoining ground.

It is estimated by the officials that a cottage with the minimum accommodation described in the above conditions will cost from 65*l.*



to 70%. Half an acre of land at 10s. a year would, at twenty-five years' purchase be 12½ 10s., and the difference between 82½ 10s., and 100% represents the cost of employing a surveyor, fees to officers, Parliamentary, and other costs. Seventeen and a half per cent. for fees, or seven years' rental, appears entirely disproportionate when the character of the work is remembered.

There is diversity of opinion as to whether such a cottage as is proposed by the Local Government Board can be carried out for 70%, or for much less than 90%. The simplest way to solve the problem would be to erect a model cottage, but probably a special Act would be necessary for so simple an experiment. According to the official specification the walls are to be of rubble 18 inches thick, the living room is to be floored with concrete, the bedrooms with wood, and the roof is to be of slates. As the cottages are security for the repayment of the loan it is wise to make them substantial, and it is hardly fair to compare the Board's type of cottage with one that has been erected by a private landlord. On the Duke of Devonshire's estate cottages have been built at 105% the pair. The floors in all the rooms are of concrete, but the inspector of the Local Government Board maintains that the material is not adapted for a bedroom floor, and he doubts whether it has any advantage over mud or clay. The objection to concrete arises from its porosity and slowness in drying whenever washed. A civil engineer who has acted for two of the poor-law unions, said that he had erected a brick and stone and slated cottage, containing a kitchen and two bedrooms for 70%; but that if a large number of them were built the cost would be about 65%. The floor of the kitchen would be of flags, and the bedrooms would be boarded. His objection to concrete was the difficulty of getting it properly made, imperfect concrete being dangerous. In Wexford plans have been prepared for cottages to cost 60% 2s. 7d., and if concrete were available it was expected that there would be a reduction of about 5% on that sum. One witness went so far as to say that houses for which the guardians will pay 70% could be erected by a farmer for 35%—but it supposes that labour will be thrown in. It is, however, unwise to be scrutinising the cost of building rather than the legal and official expenses. When it is found that the cost of proving the title for the site of a single cottage can amount to 75%, and for a row of forty-five houses can be 575%, it is evident that an opportunity is offered for law reform.

## THE VENTILATION OF THE HOUSES OF PARLIAMENT.

IN last July the members of the House of Commons were compelled to complain of the prevalence of disagreeable and noxious smells. A Select Committee was appointed, with Mr. W. H. Smith for chairman, to investigate the subject. The evidence has been published as a Parliamentary Paper. Dr. John Percy, who has charge of the arrangements for the ventilation of the Houses of Parliament, was the first witness examined, and he told the Committee that he could not give any information as to the cause of those smells, but he was perfectly certain that they did not arise from any condition within the House. The apparatus employed for the ventilation of the Houses of Parliament, with the exception of some minor improvements, such as the addition of an accessory machine for injecting the air, has been correctly described in the report of 1866. The fans for propulsion of air have been abandoned, and ventilation is now produced by heat applied through coke fires of the simplest construction. In very hot weather a sort of double-acting pump is likewise used for injecting the air, which is drawn from the river front. Some years ago Dr. Angus Smith was commissioned to test the air which passed through the House of Commons on one of the fullest nights, the House being quite crowded. He took samples of the air from different parts of the House; he took some of the air which had passed through the ladies' gallery, and his report was that he could find no sensible difference between its composition and that of the external air. The conclusion to be drawn from the experiment was that the ventilation is so rapid in its effects that there is no contamination of the air by the presence of several hundred people within the building. The air can be changed in every part in ten minutes. It is regulated according to the number of people in the House; and by long experience the assistants are so well trained, they know exactly what the right quantity of air is. Dr. Percy's principle has always been that too much air cannot be given, provided there is no sensible draught; that is a fundamental principle, he believes, in ventilation. It is found that if the velocity of the air does not exceed 1 foot 6 inches per second, then the majority of people will feel no draught. That was determined by Sir Goldsworthy Gurney, and Dr. Percy's experience confirms the accuracy of the statement. At that rate, the thermometer being 60 degs. Fahrenheit, the motion is not sensible, but a good deal depends upon the temperature. The slightest movement of the air in very cold weather becomes very sensible.

As regards the cooling of air, Dr. Percy said that if he had the power of cooling the air to a low degree, he would not take the

responsibility of cooling it very much in hot weather, because then great danger would arise to the members. But the air can be cooled to the extent of several degrees by causing it to pass over blocks of ice in the passage through which the air comes from the river front. It is also more or less cooled by the action of spray jets. That is a little apparatus for the injection of a small stream of water from a high elevation upon a small disc in front. The water seems to become pulverised. It is converted into a fine spray which covers a circle of about nine feet in diameter. In weather when it is necessary to raise the temperature, the air is moistened by steam. But there is great difficulty in producing steam free from odour. At one time leaden pipes laid in open troughs were used; but the steam so produced from the water in the troughs was not quite free from smell, and Dr. Percy had a great deal of difficulty. At last the expedient was adopted of passing the steam through large copper tubes or pipes, and letting small jets of water drop down upon the pipes. In that way steam is generated which is perfectly odourless, and the plan was found so successful it is still adopted. The sewers are ventilated in a simple way. There is a little chimney shaft communicating with the main sewer which passes along near the base of the Clock Tower. At the base of the Clock Tower there is a large fire kept burning, and in front of that fire there is an opening connected with the sewer, up which the sewer gas passes. So satisfactory was the evidence of the officials respecting the ventilation of the Houses of Parliament, it is not surprising the Committee came to the conclusion that the noxious smells did not arise from any deficiency in the sanitary arrangements of the Houses of Parliament. At the same time it was said that it would be impossible for the most perfect system of ventilation to prevent the entrance of offensive smells if they pervade the atmosphere outside the House.

The evidence made it plain that there was a possibility of the sewers in the neighbourhood of the House affecting the air. In spite of what surveyors might say, there were too many witnesses to testify to the malodourness of the atmosphere when some of the flaps were opened. But there was also some other cause more remote, and the Committee if they have not been successful in tracing it, are at least on the track. It was supposed, for example, that the smell was derived from the potteries in Lambeth. Mr. Henry Doulton was, however, able to explain that no smell or odour of any kind emanates from his firm's potteries, with the exception of the salt fumes which arise for a short time when the kilns are at a very high heat. There is no vegetable matter in the clay, and calcined bones are never used. About a year ago Messrs. Doulton felt aggrieved by the unwarranted statements respecting salt glazing, which had been made by members of a deputation to Sir Charles Dilke. They explained their process to Dr. Angus Smith, and he said there had been gross exaggeration. But Messrs. Doulton were eager to remove even the semblance of a nuisance, and, after several experiments, they have been able to reduce the quantity of salt, so that fastidious persons would hardly say there is the least nuisance. Mr. Fletcher, the Chief Inspector of Alkali Works under the Local Government Board, gave evidence to the same effect, comparing the results of experiments in St. Helen's Pottery, and he found that the air at Lambeth now contains only  $\frac{1}{100}$ th part of the quantity of salt which he found in 1873 at St. Helen's. Messrs. Doulton have done much to put down the bone-boiling nuisance in Lambeth, but now the place is made a receptacle for much of the refuse of London.

One of the members of the Committee was Sir Lyon Playfair, and it is remarkable that from his own observations he was able to demonstrate that the offensive odours have been perceptible over a large district of London for more than two years. Sir Lyon's house is in Onslow Square, and during the hot weather of 1884 and 1883 it has been found impossible, owing to that cause, to keep the windows open at night. The odours pass over the district generally between two and three o'clock in the morning, occasionally at seven o'clock at night, and sometimes but rarely on Sunday evenings. The medical officer of health for Kensington has received numerous complaints on the subject. He believes the origin of the smells is to be found in the brick-kilns at Shepherd's Bush and Hammersmith, where the refuse from dustbins is burnt. Sir Lyon Playfair, who has the acute smell of a chemist, says he believes the smells arise from some burning matters, and from the presence of clay, or a combination of impure clay and impure fuel. At Kensington the odour appears to prevail when the wind is from the west, at Onslow Square it is when the wind is from the south-west. The dustyards, where refuse that cannot be sold to brickyards is consumed, and of which there are several within a limited area of the Houses of Parliament, are also considered to be a source of nuisance, although the inhabitants of the neighbourhood make no complaints about them to the sanitary officers. The evidence would thus seem to point to the conclusion that the noxious smells which gave annoyance to many other people, besides Members of Parliament, proceed from dust heaps, refuse of furnaces, or from gases emitted from gas-works, saccharine works and other factories. As it was recommended that an officer of the Local Government Board should be directed to make further observations, it may be assumed that in the next session much more will be heard on the subject,



## NOTES AND COMMENTS.

THERE was regret expressed at the opening meeting of the Sanitary Institute in Dublin on Tuesday, when it was found that Sir ROBERT RAWLINSON was physically incapable of delivering the address which he had prepared. Dr. ALFRED CARPENTER was the reader. The address was probably better adapted to an English than to an Irish audience. The discontent which has prevailed in Ireland has made many of the gentry poor; there are few manufactures and little commerce. Under the circumstances it did not show the tact of an orator to find a Dublin auditory addressed in this way:—"If some of the higher classes did not forego some of the wealth which they had accumulated in order to enable those people of lowly station to lead better lives, they might depend upon it that the lower stratum would find their misery quite sufficient to induce them to endeavour to overturn all above them. It was by no means certain that, if this state of things continued, they might not have a social disturbance like the French Revolution of the last century, which upset society from top to bottom." As Ireland is apparently always ready for mischief, it is not surprising that there were people present who applauded this warning to the rich. But strange thoughts must arise in the minds of landlords, who have been compelled in spite of themselves "to forego some of their wealth," when they read the remarkable utterances of the chief engineering inspector of the Local Government Board.

THE Report which has been prepared by Dr. DUFFIELD, the Medical Officer of Health for Kensington, suggests the growth of the West-end of London. In the beginning of the century the whole of this district, which has an area of 2,245 acres, had but 8,556 inhabitants. At the present time it has more than 170,000. The rateable value sixty years ago was 75,916*l.*, while at the present time it is about a million sterling more. The increase has been the most marked in late years, for in ten years the inhabited houses increased by 4,368, and the population by 42,000. The whole district increased in rateable value by 644,496*l.* in the same ten years. The town sub-district, Kensington parish, has still some open spaces; but some of these are in the hands of the builder, while the Brompton sub-district is now nearly covered, most of the new houses being of an imposing character. The attraction of the district arises from several causes. Kensington is the "old Court suburb"; but more important has been the influence of the Horticultural Gardens, the Albert Hall, and the South Kensington Museum. If the landlords of the district had any gratitude they would long since have erected a memorial of Sir HENRY COLE.

A DECISION has been given by Mr. HOSACK, in the Worship Street Police Court, which will interest the owners of suburban villas. The District Surveyor for East Hackney (North) summoned a gentleman for a fee in respect of a detached greenhouse, 16 feet long and 9 feet wide, which had been erected in a back garden. The magistrate said that he would allow that a greenhouse attached to a building was not exempt, but thought one which was detached, as in this case, was exempt, and therefore dismissed the summons. District surveyors will not approve of this opinion, but from an occupier's point of view it is satisfactory. The small greenhouses which are found in the gardens of London houses are often so simple that they hardly deserve to be called structures. But, like fowl-houses, they have been brought within the terms of the Building Act. We know of a case where the flue in a small greenhouse, entirely constructed by an amateur, was treated by a surveyor as if it were a factory chimney; and many similar cases could be related.

WE lately referred to an action which had been taken by a firm in Greenock against the local Police Board for damages on account of injury to their premises, through the underpinning of a wall by the Board's workmen. It has been settled by the payment of 200*l.* and expenses. But the amount of the latter may be estimated when it is said that the trial lasted four days, the shorthand writer's notes fill two large volumes of 533 pages, the copies of the documents occupy about 300 pages, and the judgments 60 pages. The Greenock ratepayers may with reason demand why such costly proceedings were requisite when the claim was justified, and could be settled for 200*l.*

THE French Société d'Encouragement pour l'Industrie Nationale, founded in 1801, and declared of public utility by a decree of April 21, 1824, has determined to award in 1886 the large medal, bearing the image of JEAN GOUJON, to Architecture and the Fine Arts. A prize of the same kind was awarded in 1880 to M. CHARLES GARNIER, the architect of the Paris Opera House. A prize of 480*l.* is available for the inventor or discoverer of the improvement most useful to French industry, especially for those objects in which France has not obtained superiority over foreign countries.

THE members of the Library Association who visited Dublin were able to see those illuminated books of the gospels by ancient Irish scribes, which belong to the University, of which any country might be proud. The first is the renowned "Book of Kells," dating from the seventh or eighth century. It was preserved in the Columban Monastery of Kells, in Meath. The "Book of Durrow" was once commonly believed to have been written by the hand of St. COLUMBA, who died A.D. 597. But the transcriber, though named COLUMBA, was doubtless not the saint. It had formerly a cover, now lost, on which was an inscription stating that it had been made by FLANN, son of MALACHY, King of Ireland. FLANN died in the year 916. The "Book of Dimma," and the "Book of Moling," are both probably of the seventh century, and are in silver shrines, ornamented with crystals. That of the "Book of Dimma" states that the case was gilt by O'CARROL, Lord of Ely, in the twelfth century, and repaired one hundred years later by a bishop of Killaloe. The "Book of Armagh" was popularly believed to have been written by St. PATRICK's own hand, and the family of MACMOYER derived their name from being its hereditary keepers, in consideration of which they held lands from the See of Armagh. It has been inferred from the half-erased notes in the volume that a part of it was finished in 807. On one page there is an entry in Latin purporting to have been made in the presence of BRIAN BORUMHA, "Imperator Scotorum," which fixes the date of this record at about A.D. 1002. The University Library enjoys the privilege of obtaining a copy of every book published in Great Britain. Modern foreign literature is also well represented, including works on art and archæology. An increase of accommodation is requisite, and the erection of an additional library building is contemplated.

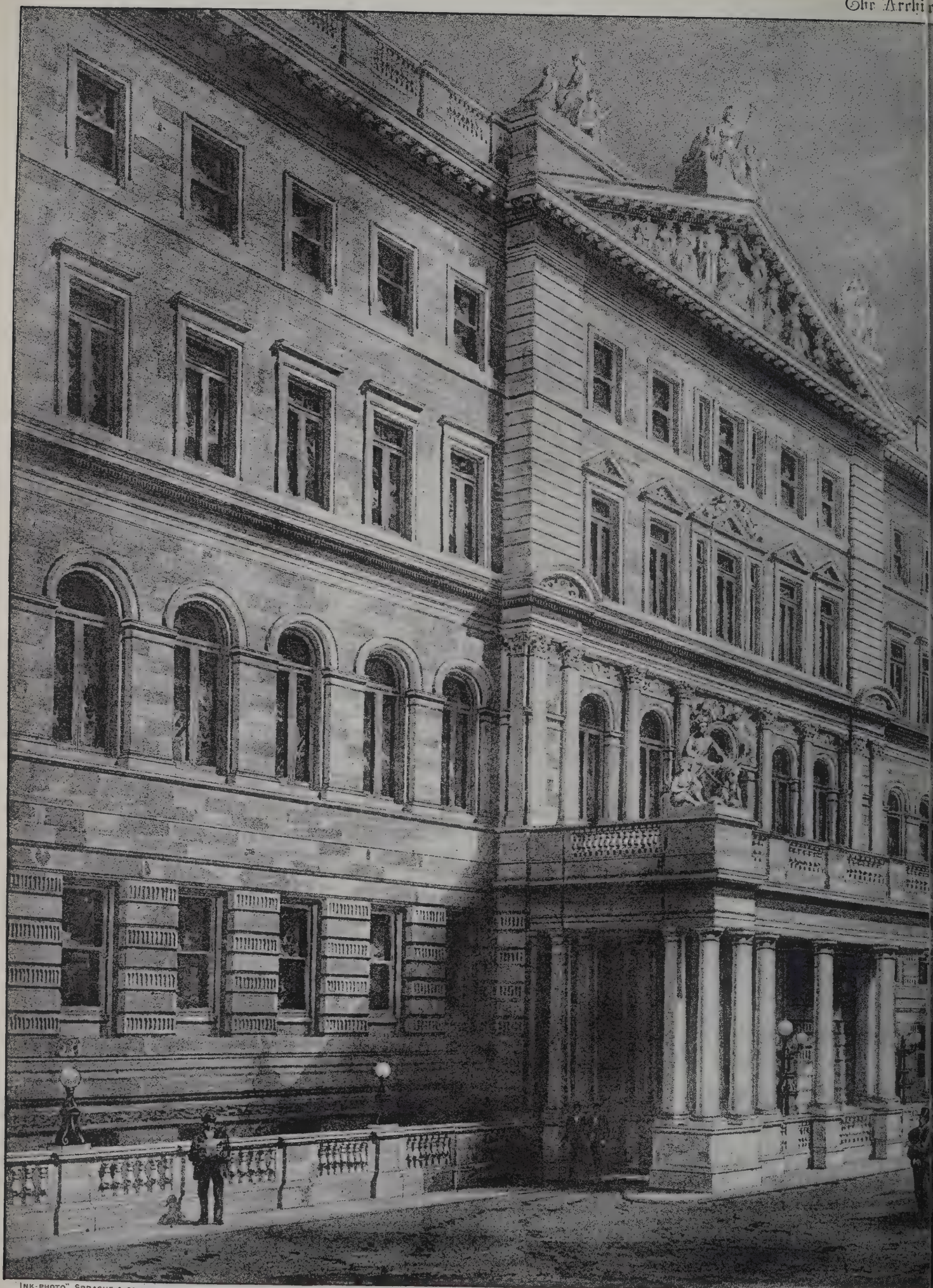
THE Manchester Corporation have obtained a collection of casts from statuary in the Louvre and the Ecole des Beaux-Arts for their art gallery. Under the new regulations the Trustees of the National Gallery are enabled to lend works from the collection in Trafalgar Square, and in consequence TURNER'S *Decline of Carthage and Departure of the Trojan Fleet*, with JOHN MARTIN'S *Destruction of Pompeii* have found their way to Manchester. From South Kensington some of TURNER'S drawings and examples of textile fabrics have been borrowed.

A PARTY of local archæologists lately visited Wirksworth, in Derbyshire. A paper was read by Dr. WEBB proving that lead-mining had been carried on there from time immemorial. The following circumstances suggest that the Wirksworth mines were known to the Saxons:—1. A mine near to Castleton was called Odin, after one of their gods. 2. EADBURGA, Abbess of Repton (to which monastic institution the lead mines at Wirksworth appear to have belonged at this time), sent from Wirksworth, A.D. 714, a leaden coffin in which to bury St. GUTHLAC, Prior of Croyland Abbey, and formerly a monk at Repton. 3. KENEWARA, also Abbess of Repton, gave the estate at Wirksworth, A.D. 835, to HUMBERT, the Alderman, on the condition that he gave lead to the value of three hundred shillings to Archbishop COLENOTH, for the use of Christ's Church, Canterbury. That the mines were worked after the Norman Conquest is proved by a survey, in the possession of the Duchy of Lancaster, of Peveril Castle, made in the reign of Queen ELIZABETH, who greatly encouraged mining operations by inviting skilled workmen from abroad; and this survey describes the castle as being covered with lead. As it was built in the reign of the Conqueror, it is more than probable that the lead used in its construction was obtained from Derbyshire mines; in fact, Domesday Book mentions the working of three lead mines at Wirksworth, one at Crich, one at Ashford, one at Bakewell, and one at Metesford, a manor in the neighbourhood of Matlock.









INK-PHOTO, SPRAGUE & CO, LONDON.

DESIGN FOR ADMIRAL

[ COUP

BY MESSRS H. HALL



Oct 4<sup>th</sup> 1884.



& WAR OFFICES

W. H. POWELL.







## ILLUSTRATIONS.

DESIGN FOR THE ADMIRALTY AND WAR OFFICES.

THE design published this week is by Messrs. HENRY HALL & W. H. POWELL, of Doughty Street.

## A DESIGN BY MICHEL ANGELO.

A LETTER has appeared in the *Times* from Mr. J. C. Robinson, F.S.A., containing the following account of the discovery of a design by Michel Angelo pasted in a book belonging to Sir Andrew Fountaine:—

The particular leaf which has fallen to my share I had noted at the first opening of the volume, in which it was charmingly mixed up with all manner of good, bad, and indifferent "drawings by the old masters." Would anybody else find it out—would some enlightened but hatefully inconvenient curator of a public collection, or some pragmatical dealer, deprive me at the auction of my lawful prey, my discovery? How these cankerous misgivings weighed upon me till the triumphant moment when the much-coveted treasure was knocked down to me, together with two other drawings, for 37s. only! Obviously the treasure had appealed to no one else, yet it was nothing less than an entirely unknown original drawing by Michel Angelo, of singular interest and art value.

This drawing, indeed, shows the grand old Florentine in an entirely new character, that of an ornamental or industrial designer; it is, in fact, a beautiful outline sketch in black chalk for a silver vase or "saliera" (saltcellar); and what is scarcely less remarkable than the fortuitous preservation and recovery of this design is the fact that its purpose, meaning, and exact place in the life's work of Michel Angelo are known. It confirms, indeed, and gives tangible shape to the record of an episode in the career of the artist which has only just been revealed to us. Within the last few years much new matter has been added to the record of Michel Angelo's life and works. The archives of the Buonarrotti family, containing a vast mass of his letters and business papers, have been acquired by the Italian Government and in great part published.

Moreover, diligent search has been made by archivists and art critics in the various Italian State records. Michel Angelo's important works for popes and princes were sure to involve the preservation of voluminous official and other documentary matter, and researches in this field have further added greatly to our knowledge of his personality and works.

Perhaps the most important instalment of fresh information is embodied in Signor Aurelio Gotti's new life of the great artist, and a particular document given *in extenso* therein completely identifies and elucidates the present design. This is a letter now preserved among the papers referring to the Duchy of Urbino, in the State archives of Florence.

It is a business communication from one Geronimo Staccoli, resident agent or Minister in Rome of the Duke of Urbino, Francesco Maria I., to the duke, his master. As this letter speaks for itself, and is, in many respects, interesting, I give a translation of the part of it which relates to the work\* in question:—

"Most illustrious Lord,—In reply to a letter from your Lordship of the 22nd of last month, I beg to say that several months ago was finished the model of the saltcellar in relief, and it is begun to be executed in silver, with paws of animals supporting the vase of the saltcellar, and around this vase are festoons or garlands, also masks, and on the cover is a figure in the round with some more foliage, as Michel Angelo designed it, and as it appears in the finished model, mentioned above.

"Seeing that this has already cost more than eight or ten ducats for the making, and it will come to more still, I would not proceed further without the knowledge and sanction of your Lordship. However, I beg to inform you that there is here sufficient silver to carry the work out; but should six or eight ounces be wanting, I will provide them. For the making of the said saltcellar the artists who formerly served my lord your father demand thirty crowns, and twelve ducats of Portuguese gold for the gilding; but of this gold the value will remain on the piece. They want also a third of an ounce of 'callo' (*sic*) to a pound of silver; but this matters little. Your Lordship is now informed of all that concerns the saltcellar.

"From Rome, the 4th day of July, 1537.

"IERS. STACCOLUS, Servitor."

It is fortunate that the worthy agent gave us a detailed description of the work, for it corresponds in every particular with my drawing, and identifies it as the original design for this saltcellar, without any possibility of doubt. On this point, moreover, whoever is acquainted with the varying phases and methods of ex-

pression of the "mano terribile" will see the unmistakable impress of Michel Angelo in every line and touch of the crayon. A further satisfactory, though unneeded, assurance is in the fact that the drawing is signed with the name of Michel Angelo in an ancient, apparently contemporary, hand.

For the moment, however, we may turn from the drawing itself to the notice of the lost treasure which it prefigured. It is to be feared, alas! that Michel Angelo's saltcellar was long ago transmuted, in all probability melted down and mixed into an endless shuffling of vulgar coin—"Alexander's dust fated to stop a bung-hole." The Duke of Urbino's saliera was one of those troublesome commissions which were from time to time thrust upon Michel Angelo, sorely against his will; it was in reality a stopgap or kind of peace-offering, and marks, in fact, a stage in a woful business, which weighed upon the great artist as the one great trouble of his life. This burden was the famous monument to Pope Julius II., that yawning sepulchre which seemed ever ready to entomb the artist himself.

As we learn from Staccoli's letter, the saltcellar was produced in 1537; but Michel Angelo had undertaken the monument for the Pope so far back as 1506 even. Julius died when little progress had been made with it, and his heirs were these same Della Rovere, Dukes of Urbino. To that family, then, Michel Angelo became accountable for the completion of the work. The artist had received considerable sums of money on account of the tomb, and he himself ardently desired to carry it to completion as the master work of his life, but Julius had interposed all manner of hindrances and obstacles. Four years of Michel Angelo's time had been taken up with the ceiling of the Sistine Chapel alone. When Julius died and Leo X. succeeded, Michel Angelo returned with eagerness to the monument; but no sooner had he settled again to the work than Pope Leo, in his turn, heaped fresh commissions upon him. Julius was the dead lion, and the living Leo cared nothing for his memory. To all the artist's entreaties to be allowed to carry out his contract like an honest man, the new Pope only replied that he himself would arrange matters, and be responsible to the executors of his predecessor. But this undertaking never led the Pope so far as to furnish the means of repayment of the sums advanced to Michel Angelo, by which alone he might have got the burthen off his shoulders. Michel Angelo had done work enough for the money he had received, and it had obviously become impossible for him to carry out the tomb as it had been originally planned. In this conjuncture, nevertheless, the artist was subjected by the duke and his agents to continual threats of legal proceedings, or worse even, while all endeavours to resume the tomb work were immediately put a stop to as soon as discovered by his inexorable taskmaster the Pope. In one phase or other this miserable business dragged itself along nearly forty years. It was not, indeed, till 1545 that the work, after having suffered endless modifications in the sense of constant curtailment and diminution, finally took shape in the single figure of the Moses, with its architectural backing, as it is now to be seen in the Roman Church of San Pietro in Vinculi. Enough, in all conscience, for fifty popes this one immortal statue; yet it must have seemed little better than a standing fraud to the descendants of the fiery Julius.

About 1537 Michel Angelo seems for a time to have got upon a somewhat better footing with the Duke of Urbino, who could not fail to be aware that the artist himself was not to blame for the continued neglect of the tomb undertaking; and the fact now revealed, showing that Michel Angelo went out of his way to design and model with his own hands this saltcellar, is significant evidence of the improved understanding.

Such, then, was the origin of the leaf of paper which has just seen the light. The duke wanted a fine new centrepiece for his table; for in those days the saliera was the one capital standing ornament on every board, and the genius of the mighty master of all time was forthwith pressed into this humble service. That the saltcellar was actually carried out we may safely assume from Staccoli's intimation that, at the time he wrote, the work was, in fact, partly finished in silver. Hundreds of these splendid saliers, unique masterpieces of the greatest artists of the Italian Renaissance, were doubtless made; yet at this moment I can recall only one other extant specimen—Cellini's famous saltcellar, made for Francis I., and now at Vienna.

The hard fact is that the precious metals were far scarcer in olden times than is usually imagined, and it was all but impossible to keep even the most exquisite production of human genius, thus embodied, long out of the melting pot. The chances are, then, that even the world-renowned repute of Michel Angelo himself could not, in the long run, outweigh the few paltry ounces of silver and the twelve Portuguese golden ducats, spread in the shape of gilding over it. Be it as it may, it seems obvious that all memory or tradition of Michel Angelo's saltcellar must have faded away at a comparatively early period. The work may, indeed, have outlived the Dukes of Urbino and their dynasty, but that it should be still extant, hidden away unidentified, can scarcely be hoped for. The story of the Urbino Princes, nevertheless, gives us a clue to search for this lost treasure, and it would be strange, indeed, if it were to be yet unearthed. The Duke of Urbino, Francesco Maria I., died in 1538. All his successors were wealthy princes,

\* Gotti, Vol. ii., Appendix, p. 28. The letter had, however, been published not long before by the editors of the new Italian edition of Vasari.



and the revolutions and plunderings of earlier days had been succeeded in Urbino by unbroken peace and prosperity. When, indeed, in 1631, the dynasty came to an end by failure of male heirs, and the Duchy reverted to the Papal dominions, the allodial possessions and personal property of the last Duke, Francesco Maria II., were regularly transferred to his granddaughter, the wife of Ferdinand II., Grand Duke of Tuscany. All the art treasures and other valuables were removed to Florence, where many of them still ornament the palaces and public galleries, and it seems reasonable to suppose that the saliera had not then been made away with. There is, however, one possible reason why it may have been, and that is from the fatal influence of changing fashion, for by that time single standing saltcellars of great size had become obsolete, and had been replaced by smaller and more numerous receptacles on the modern plan. This, indeed, may have been one of the reasons which induced our own Charles I., about this very time, to alienate the splendid saltcellars of the English Crown plate, incomparable treasures of art as they were. From the previous account it is obvious that, supposing the Urbino saltcellar to be anywhere still extant, it should be sought for in the plate-closets of the ex-Grand Dukes of Tuscany. Perhaps this communication may have the effect of causing search to be made.

It now remains only briefly to describe the details of the work represented in the drawing. The body of the vase is circular in form, the lower part hemispherical, with a deep hollow or cavetto above, the two members being separated by a broad band or fascia, which thus encircles the centre of the piece. This vase is elevated or slung upon three console legs, the lower parts of which, as Staccoli indicates, terminate in animals' paws, in the style of the antique. The piece is thus a kind of tripod or "casolette," and beautiful masks of a satyr with long ears are placed in the centre on each side, where the console legs approach each other in the lower part, and horned masks or animals' skulls are seen in the cavetto above. From these masks proceed hanging garlands, which encircle the vase. The cover is simply ornamented with three dolphins, or plain foliations with dolphins' heads, their projecting beaks hanging over the margin. On a pedestal above stands the "figura de rilievo tutta," as Staccoli describes it, or statuette in the round. This is a beautiful figure of Cupid with outstretched wings poised in a finely-contrasted attitude on one leg, and in the act of shooting an arrow from a bow.

This description, vague and inadequate as all such attempts must be, is but the faintest shadowing forth of an exquisitely graceful composition, admirably proportioned in all its parts, severe and perhaps somewhat too architectural in style, but most characteristic, and unlike any other man's work. To say, indeed, that the composition is eminently Michel Angelesque in every form and motive is to indicate that it embodies the original afflatus of a great genius, which cannot be coldly set forth by words, or scarcely, indeed, rendered comprehensible other than to the sympathetic and receptive few. Needless it is to say that the Cupid is an infant Hercules, for the little figure, two or three inches high only, if magnified would seem an overpowering colossus; and there is a strange, weird expression in the leering masks, as of the grim humour of some jovial Titan, ready, nevertheless, to dash the world to pieces in a changeful moment.

## GLASGOW ARCHITECTURAL ASSOCIATION.

THE first of a series of lectures for the members of the Glasgow Association was delivered on September 23 by Mr. James Thomson, F.R.I.B.A., upon "Other Hindrances to Health in our Houses." Mr. D. Barclay presided. At the outset of his paper, referring to the saying that many articles are manufactured not for use but for sale, which saying has also been applied to buildings, Mr. Thomson, while not entering on the question as to who are parties to blame for unhealthy houses, said that, while well known to the profession, the public appear to be ignorant of the fact that a very large proportion of the dwellings in both England and Scotland are erected without an architect's assistance. The most important point to be considered before building is the site, of which in Glasgow there are many different varieties—solid ground, rock, sand, mud and water, and made-up. The last is especially to be feared, not only on account of the danger to health from escaping gases, but also by its subsidence opening drain pipes under and gas pipes throughout the whole building. The excellent provision in London and Liverpool that no dwellings be erected on made ground containing animal or vegetable matter is an excellent one. Under the head of "plumber work," the various closet and bath-room appliances were considered, and the profuse use of these conveniences, even to the extent of providing such to each bedroom, deprecated as by no means unmixed blessings. Gas also, a convenience taken now as a matter of course, makes us unmindful of its danger. Besides the 10 per cent. leakage of gas, there must be a large portion escaping within the house from corrosion of pipes placed in improper situations, and actual holes caused by careless tradesmen; so, for absolute safety, the lecturer advocated their exclusion from sleeping apartments. The

cause of smoky chimneys was shown to be the wrong situation of the fireplaces in rooms, insufficient area of flue, and stacks parsimoniously reduced instead of being carried well above the highest roof level. With some remarks on modern workmanship, and noticing the Dean of Guild's proposal to appoint inspectors of drains as one deserving the support of the whole profession, the lecturer closed. Mr. Thomson was awarded a hearty vote of thanks for his interesting paper.

## PICTURES WITH CHANGEABLE COLOURS.

THE *Century Magazine* for October contains a sketch by Mr. W. H. Bishop, entitled "Braxton's New Art," which is worthy of Hawthorne. The latter described men who spent their lives in seeking after visionary things. Mr. Bishop imagines an artist who tries to discover colours which, when used on canvas, will vary in accordance with the changes of the year. The following extract describing Mr. Braxton's experiments will suggest the style of the narrative:—

The apartment was of some size, not uncomfortable in aspect, but decidedly *bizarre* for the place. The occupant had an appreciation of colour, if the flowered chintz coverings, including a canopy to the old "four-poster" bed, and the rich barred table-spread were of his providing. There were a couple of tall blue vases, a piece of armour, a carved oak chest, a lay figure, easels, and a pair of Indian clubs, for which his hollowing chest would have been the better had they not been allowed to disappear under an increasing cover of dust.

In one corner were canvases, and charcoal and crayon drawings in large variety, tacked upon the walls. In another were an air-pump, microscope, electric batteries, crucibles, spirit lamps, blow-pipes, and the small furnace. In one corner he would have been certainly pronounced artist, in the other chemist, or even alchemist.

What is his singular occupation? He pulls out an old memorandum-book from a mass of papers among which he is searching, and drops down to inspect it. Let us look on as he reads from one of its pages in a soliloquising way.

"*Mem.—Landscapes with Changeable Colours.*"

"To examine why the vegetation of nature changes from pale and tender greens in spring to full deep greens in summer, and red, yellow, purple, and russet in autumn."

"Is it the action of the atmosphere on a delicate colouring matter contained in the sap?"

"Might not this colouring matter, if so, be extracted without destroying its properties?"

"Might it be possible to combine it with a very sensitive medium or varnish, to paint landscapes still so susceptible to the action of the atmosphere as to change with the seasons, as actual landscapes in nature change?"

"Here it is!" he says. "How little I thought when I put down this entry, as a passing fancy, in university days, that I should ever be actually engaged in trying to carry it into effect! What would the university men think of me now? Ah, well! they have all gone their way, and left me astern. Each to his own method for fame and fortune! If I could but cease thinking of the rewards of success. It paralyses me. Ah, well! this is not work either." And again he resumed his occupations.

It was many years since he had left college. He had established for himself even there the reputation of a person with some curious kinks in his brain. He had since tried business and a learned profession, and failed. He had been left to himself, travelled, and dissipated in his trials a good share of a moderate property that had fallen to him. He was long confident that he should find the right thing at last, but later on was not so confident. He had always had a certain taste for the fine arts, and beautiful shapes and colours gave him intense pleasure. Something turned his attention especially that way at last, and he asked himself, "Why not be an artist? It will give me license at least to be different from others, and who knows but it is my true vocation?"

He went at art thereupon, but was not content with the usual slow and patient steps. The crotchet took him of some highly original stroke. He must regain the distance, rapidly lengthening, between him and the companions of his former life, by some brilliant, new achievement which should lift him far above and beyond the ranks of ordinary men.

Some may recollect, but probably very few, his effort to create a distinctive "American art." This was to be done by idealising modern industrial progress. He endeavoured to glorify and give a sort of personality to machinery. He had in his pictures locomotives, trip-hammers, steam-dredgers, and steam-harvesters; he had pale girls among a tangle of spinning-jennies, and grimy mechanics in dusky boiler-shops. These works were not often admitted to the exhibitions. There were touches of good in them, in a figure or an effect of light, but they were mainly very crude and callow. The public resolutely refused to associate its interest



in the subjects. They were pronounced "barbaric yawps" after the inexpressible.

This ambition overleaped itself. Its author retired into seclusion, growing more and more morose, but eating his heart out with a fiercer determination than ever.

At length came up again this last idea of his, original indeed. He had revived an early whim, and now persuaded himself that it was actually capable of realisation. He had made himself chemist and botanist for its sake, had withdrawn from all other pursuits of his life, left his home, and laboured at it indefatigably for months.

Shall I describe here his processes? Shall I enter upon his confused heaps of memoranda, often written upon random scraps, and little intelligible? Shall I open his large volumes of record, showing the composition of colours, the effect of chemicals upon one another, and of various forces upon them? It would not be an easy task. He was himself far from a methodical person.

He picks up a volume of the writings of an ancient alchemist—not that he has faith in those gentry; he would scorn it in these days of exact scientific research. It is a volume of his *bric-à-brac*, which he bought when not able to contain a certain feeling of likeness once between them and him, in his peculiar pursuit. He falls upon a passage which insists on the necessity of a preliminary ingredient only of the second rank, and absolutely necessary to be found before the great secret itself, the elixir of life, or philosopher's stone, as the case may be, could be discovered. This was called, in mystic parlance, sometimes "the ferment of Luna for the red," and sometimes "the ferment of Luna for the white—having found which you will rejoice."

He set to work to brew, ferment, distill, and extract essences, as of old. He was utilising in his labours plants growing in his windows and a dried collection like a housewife's herbarium. He brought back every day fresh leaves and barks gathered in his walks. He produced vacuums and electric and magnetic currents, generated, combined, and decomposed vapours. He kept his vigil far into the night, then threw himself exhausted on the bed, and dreamed an interminable chemical dream till morning.

## GLASGOW INSTITUTE OF ARCHITECTS.

THE annual excursion of the Glasgow Institute of Architects took place on Thursday in last week. The party, numbering about eighteen, went by rail to Merchiston, and thence drove to Dalmeny Church, where nearly an hour was spent examining this interesting building, which is the most perfect remaining example of Norman work in Scotland. The party drove on to Hopetoun House, the seat of the Earl of Hopetoun, where the collection of paintings and other works of art were examined with great interest. The Forth Bridge works were afterwards visited. Here the party were met by Mr. Arrol, and an hour or two was spent in a careful examination of this undertaking—one of the greatest efforts of modern engineering. On returning to Edinburgh the excursionists dined together in the Windsor Hotel, under the presidency of Mr. James Thomson, F.R.I.B.A., and returned to Glasgow by an evening train. The following gentlemen were present:—Messrs. D. Barclay, J. J. Burnet, Campbell Douglas, W. Landless, W. F. McGibbon, H. H. McClure, J. Mercer, A. Petrie, James Sellers, jun., A. Skirving, D. Thomson, James Thomson, and T. L. Watson. Among the guests present were Messrs. J. A. Campbell, D. Robertson, and G. L. Watson.

## ARCHÆOLOGY IN CHESHIRE.

THE members of the Lancashire and Cheshire Antiquarian Society lately visited Nantwich, Dorfold Hall, Bunbury, and Peckforton.

### Nantwich Church.

This building was described by the Rev. T. W. Norwood. It is mainly fourteenth-century work, with some few additions of the first years of the fifteenth. The nave is a very graceful specimen of early Decorated work. The chief architectural puzzle of the church is the mixture of styles in the western arch supporting the tower, where the concave basement mouldings and the stiff-leaved foliage on the caps are associated with Decorated jamb mouldings, the scroll-moulding abacus, and a continuous series of wave mouldings on the arch. This is a mixture of late Norman forms with Decorated. The chancel is a beautiful work of its kind, of about the same age as the chancel of Bunbury, which is known to have been founded in 1385. It has the same pear-shaped tracery in its Decorated windows, but is more elaborate and ornate than Bunbury. There is a fine stone pulpit in the north-east angle under the octagon tower, and contemporary with it, that is, of transitional age between Decorated and Perpendicular, about 1380. The east and west windows when Pennant figured the church in his journey from Chester to London were of fine Perpendicular character. The eastern remains, but the western has been replaced by a Decorated window, designed by Sir Gilbert Scott,

being the second design of his, as the first after insertion was not found satisfactory. The north and west doors of the nave and the windows of the clerestory are also of Sir Gilbert Scott's work. It would not be proper to praise them. Mr. Chater, who for good reasons was much beloved, swept away much that was interesting from Nantwich Church, in particular the arms of the Earls and Barons of Chester, which were formerly arrayed there on the woodwork of a Jacobean gallery. The most interesting coat of them all—the shield of Malbanc, Baron of Nantwich—has been found, and that is preserved at Wrenbury Parsonage. The transepts have chantries both north and south, of which the northern is now called the lady chapel, and the southern is seen by the square female head dress of Henry IV. age to have been an addition of the early fifteenth century. Besides these chantries there are indications of other altars in the eastern part of the transepts. The occurrence of a fiendish figure hugging a woman with a can occurs several times as a gargoyle on the more eastern exterior of this church, and probably refers to some old story of the town. Nantwich appears to have been alienated by the Abbot of Combermere before the Dissolution. It was much regretted that in the late restoration some of the finest finials of the canopied tabernacle work were stolen and never recovered. There is a library over the church porch, with no books of great value, and on the east side of the porch a little compartment as if for a custodian priest, part of whose duty it may be to celebrate marriages in the church porch, as Chaucer says of the "Wife of Bath:—"Husbondes at the chyrche dor, hadde she had fyve." Externally the finest portion of the church is the chancel. The new red sandstone material has not worn well; it is much peeled and honey-combed under five centuries of weather.

### Dorfold Hall.

This mansion, which is situate about a mile from Nantwich, was next visited. Mr. James Hall read a description:—Dorfold, or, as it was called prior to the eighteenth century, Deerfold, Dorfold, or Darford, the last being an old pronunciation of the word, which local vernacular has corrupted into Darfoot, is the name of an ancient manor in the parish of Acton, about a mile from the town of Nantwich. We may suppose Deerfold to have been originally a clearing in the forest, where the lord's manor house and mill were defended by a pool or moat and a gateway that would warn evil-minded persons that "he that entereth not by the door of the fold, but climbeth up some other way, the same is a thief and a robber." From the time of Henry III. to the end of Elizabeth's reign, a period of about 400 years, Deerfold was held by the families of Wetenhale, Arderne, Davenport, and Bromley, in succession, until it was sold, in or about the year 1602, by William Bromley, brother of the Lord Chancellor Bromley, to Sir Roger Wilbraham, Kt., Solicitor-General of Ireland, Master of Requests to Queen Elizabeth, Surveyor of the Court of Wards to James I., and son of Richard Wilbraham, gentleman, of Nantwich. Sir Roger Wilbraham, who was married and lived in London, shortly after the purchase of Deerfold, handed over the estate as a gift to his youngest brother, Ralph Wilbraham, who held the office of Feodary for the counties of Chester and Flint. Ralph Wilbraham at once set about improving his new possession, and in the year 1616 he had finished building the lofty and handsome residence of brick and stone, now called Dorfold Hall, on the site of the former timber mansion of the Bromleys. The hall is a good specimen of a manor-house of the Transition period of domestic architecture, combining, as it does, some features of house building of a former age, with arrangements suited to the altered circumstances of the times in which it was built. Thus, although it was no longer the custom for servants and retainers to dine together at the lord's table in the common hall, Ralph Wilbraham introduced such an apartment as the central room of his new manor-house, having the usual bay window at one end of the room, and a corresponding bay, as a porch, at the other end; but, at the same time, he found it necessary to provide a greater number of private rooms—bed-chambers and withdrawing rooms—than were usually found in old mansions at that time, consequent upon the altered manners of the gentry during the sixteenth century. In another important particular, the plan of the former house seems to have been reproduced in the new hall, inasmuch as the south front, being open to the park, had no door (although there is one now); while the north and principal front, as in former days, was made to face a quadrangular courtyard; which, according to a drawing in the possession of Mr. Wilbraham Tollemache, was enclosed by a wall on the east and west sides, and on the north by two lodges, as servants' apartments, and a gateway that could only be approached by a bridge across the pool or moat. A good carved staircase, at the west end of the hall, leads to a handsome drawing-room and bed-chamber, both of which are said to have been prepared on two occasions for the reception of royalty; the first time for James I. in 1617, who preferred staying at Townsend House in Nantwich; and a second time in 1882 for the Empress of Austria, who, likewise, did not honour Dorfold with her presence. This bedroom has a screen, and wainscoting of oak of very rich grain; and over the fireplace the royal arms and date 1621. The drawing-room is panelled, and has a coved plaster ceiling of intricate



design with pendants. On the stone chimneypiece is painted the arms and crests of three Knights of the Garter in the time of Queen Elizabeth. These armorial coats have never been refreshed, although they have the appearance of having been recently repainted. In various bedrooms are represented the arms of Delves of Doddington, Crewe impaling Clippesby, Done of Utkinton with several quarterings, and Wilbrahams of Woodhey. In accounting for the presence of these armorial decorations, it may be suggested that they were introduced by way of compliment to notable persons living at the time the hall was built; and not because those persons acquired a temporary interest in the place, as supposed by the editor of the new edition of Ormerod's History. In like manner at Crewe Hall, which was then in course of erection, a similar compliment was paid to the neighbouring country gentlemen, by placing their armorial devices on the staircase of that hall. The hall is in a good state of preservation; but an east wing, quite out of character with the rest of the building, and very ugly but for the mantling of ivy which covers the south front, was added late in last century. Before this addition the east end of the hall was doubtless as picturesque as the west end now is, with its handsome bay window and groups of tall chimneys. The terrace garden has two old stone fountains, probably once belonging to some of the churches in the neighbourhood. The ball ornaments on the terrace wall formerly adorned the gateway of the old District Bank in Nantwich; and the stone gateway leading to the gardens was brought from Townsend House in the same town. The pool is now partially filled up, and the courtyard has low lodge-like buildings of brick and stone, a clock tower, a stone balustrade, and iron gates, all of modern construction, except the two front lodges. In the centre of the quadrangle, on a pedestal, stands a massive group of dogs in bronze, keeping mimic watch and ward over this old memorial pile, which until a few years ago was hidden from view by the tall ancestral trees of Dorfold Park. After leaving Dorfold Hall the party drove to Acton church, and afterwards to Bunbury church.

The plan of the latter, as described by Mr. Norwood, is west tower, nave, and two aisles, a chancel, south chapel, and south porch. The lower part of the tower is handsome Early Decorated work, with a very graceful west window in the façade, of about the same age as the nave of Nantwich. The north drip termination of this window is a lady's head wearing the wimple of Edward II., and the scroll-moulding occurs as a string on the same front. There are two buttresses, rectangular to the wall, of several stages. The upper part of the tower is rather poor Perpendicular. Within the tower, as at Acton, rests on three arches, but all of one character—namely, Early Decorated, with roll and fillet and wave mouldings, as at Nantwich, with which this work is therefore co-eval; the same masons may have carved both. Proceeding eastward, it is seen that the nave, aisles, and clerestory have been rebuilt from the ground, in the last Perpendicular age, as is shown by the Lady Margaret's chevron head-dress in the interior of the north aisle, and by the generally shallow character and mouldings of the whole work, which, though so slight and comparatively poor, is yet spacious, and not inelegant. The chancel is said to have been founded in 1385, by Sir Hugh Calveley, a great knight errant of that time, an adventurous soldier of fortune, conspicuous in the fraternity called the Companions, who, out of love of danger and exploit, fought as chance directed, sometimes for one sovereign, sometimes for another, with a general preference for the King of England. Sir Hugh's monument is set in the midst of the chancel area, a place usually only assigned to kings and very illustrious persons, as in the cases of William Rufus at Winchester, King John at Worcester, and Henry VII. at Westminster. His effigy, of great size, is believed to correspond to his stature. He wears plate armour, with a shirt and gorget of mail. His feet on a lion, his head upon his crested helmet, his arms upon his surcoat, his sword and misericorde dagger by his sides. No Cheshire hero is of greater renown than he. His tomb has survived with very little mutilation. The chancel is of characteristic Late Decorated work, with the convexo plane string in the interior, and pear-shaped tracery in the windows. North of the communion table is a monument of an old admiral of the Beeston family, who is said to have fought against the Spanish Armada. He lies in effigy with his legend, arms, and quarterings. On the north wall, in the place of an Easter sepulchre, is a Decorated founder's tomb, with an ogee canopy. East of the chancel is the chapel of the Egertons of Kidley, with a legend expressing the name and date of the founder; his arms and other ornaments occur upon it. The south porch is Decorated like the west front, near which, in the churchyard, lie many monuments and stones of great interest and curiosity, which are carelessly suffered to perish under exposure to the weather, as if there were no vicar and no rural dean. It is a unique collection of monuments for Cheshire, so far as is known. The stones are thirteen in number, ranging from a rudely-incised coffin stone with an ill-drawn wheel cross, probably early Norman, to two female effigies of the beautiful work of Edward II. style, as the dresses and wimples show. There are a stone coffin and mutilated figures of men in armour of the thirteenth and early fourteenth centuries, but most beautiful are the much-worn Decorated female effigies. Many of these stones are made precious by the legends upon them in large Lombardic letters and Norman-

French inscriptions of the Edwardian time. These monuments, taken together, may be thought to range in time from Early Norman to Late Decorated, and there are incised crosses on some of the coffin stones which belong to the following Perpendicular period. Two of these lie apart near the east end of the church. A clean sweep was made at Bunbury of much that was curious and valuable (so report says) in the late restoration. The interior is now as clean and smart and uninteresting as the restoration men could well make it.

At Beeston Castle, a letter from the owner, Lord Tollemache, to the secretary of the society, was read, in which his lordship said:—You and your friends will be horrified at the kind of lodge I unfortunately erected in connection with the wall I built round for the protection of the building. I hope in a few years, if I live, to pull down the lodge and erect in its place a different kind of building, perhaps a simple cottage of stone. You will, of course, examine as far as you can the well, formerly filled up with ruins by the Parliamentary army, and which I had cleared out many years ago. In that examination you will remark the upper part for a few yards down the shaft is new work, and very distinct from the old work, which was originally constructed in the time of Edward I. I have always understood that when Edward I. determined on the conquest of North Wales, Beeston Castle was the first constructed with the view to carrying out his plan, which was as able as it was successful. After Beeston, Chester Castle was erected, then Flint, then Ruddland, Conway, Beaumaris, and Carnarvon, each station and troop supporting the other. The bulk of the township and manor of Beeston belonged to the family of Beeston, and the other portion, a small one, belonged to the Wilbrahams, from whom I am maternally descended, the eldest daughter of Sir Thomas and Lady Wilbraham, of Woodhey (the head branch of the family having married Tollemache). Woodhey Hall was pulled down by my great grandfather, Lionel Dysart. I, in consequence, purchased that portion of Beeston township which originally belonged to the Beestons, and a portion of the Peckforton Hill from the Mostyns. This enabled me to erect my present residence. Some time after making the purchase, I was offered Beeston Castle and the hill, which really belonged to the Crown, and for which an acknowledgment was paid. I availed myself of that offer. Although I have troubled you with a long letter, I have forgotten to state that, according to the old legend, there was at the bottom of the well a passage leading to an opening outside the hill. The opening of this passage was discovered by the workmen, but I am ashamed to acknowledge that I omitted to give directions for the cleaning of it out. The best way of lighting up the well is to throw lighted newspapers down it, and you will probably observe that some of the embers will rise from the draught below, probably coming from the passage. Owing to the drainage of the land in the neighbourhood, the bottom of the well was simply moist when cleared out. I must add that if you or any of your party wish to see the interior of Peckforton, I beg you will do so. I never purchased a picture, and all now at Peckforton came partly from old Woodhey Hall before it was pulled down, but chiefly from Helmingham Hall. I had always a dislike to a modern castle, but I found owing to the heavy gales, the colour of the stone, &c., a residence on the Peckforton hills could not be in any other style. I took care to have it thoroughly architectural and true. I meant the whole mass to be of stone, and not brick building veneered with stone, every turret with a staircase, and not for appearance. Most of the pictures are by Sir Joshua Reynolds, Gainsborough, Wilson, Morland, &c., &c., and can only be seen with advantage when lighted up on an evening.

This visit concluded the day's proceedings.

#### BOXLEY ABBEY.

A PART of the Kentish estates of Lord Aylesford was sold by auction, on September 25, at Maidstone. There were thirty-three lots in all, including farms, building and accommodation land, wharfage, stone quarries, brick, lime, and cement works, &c., the lots varying in area from building plots to good-sized farms. The principal feature of interest in the sale, as far as the general public is concerned, was, of course, the Boxley Abbey estate, which is situate about two miles from the county town, the remainder of the property offered being in the parishes of Maidstone, Aylesford, Burnham, Snodland, and Rainham. The Abbey estate comprises 905 acres, and has upon it the remains of the old Cistercian Abbey of Boxley. It was at Boxley that the Cistercian monks took up their abode on their first settling in England. The walls date from the beginning of the eleventh century, but the Abbey itself was founded about the middle of the twelfth century by William d'Epres, Earl of Kent. In the reign of Edward I. the Abbot was summoned to Parliament on several occasions. Edward II. took up his residence here during the siege of Leeds Castle, a few miles distant, in October 1221, which siege arose from the refusal of its governor to provide lodgings for Queen Isabella and her suite when going on a pilgrimage to Canterbury.

The Abbey lies in the valley, at the foot of the picturesque



Boxley range, and close by runs the pilgrims' road leading to the shrine of St. Thomas of Canterbury. The old monastic chapel has been converted into a comfortable Elizabethan residence, and the grounds, gardens, and general surroundings, apart from their interest to the antiquary and archaeologist, are very attractive. An old tithe-barn remains in a good state of preservation, and the remains of the Abbey form a picturesque ruin, full of interest. The rental of the Boxley Abbey Estate is at present about 1,000*l.* a year. At the sale Mr. A. W. Dunlop, of Westminster, representing the Earl of Romney, was the purchaser, the price paid being 26,200*l.* Mr. Dunlop also secured for his lordship Little Buckland Farm, Maidstone, having an area of 111 acres, and let to a yearly tenant at 320*l.* per annum, the price given being 12,000*l.*; and also two or three smaller lots. The total sum realised by the sale was over 80,000*l.*

### HEIDELBERG TRANSFORMED.

NOT many of your readers, says a correspondent of the *Scotsman*, may remember Heidelberg thirty years ago. Should those who do revisit it, they will find it wonderfully changed. It is nearly as long since I first saw that venerable University city, and half that time since I last saw it; and now I find it difficult to recognise in the Heidelberg of to-day the Heidelberg of a generation ago. What struck me the most as the train neared the railway station was the large number of tall chimneys. One of the most conspicuous notices before entering the station was one to the effect that a particular building was a "Portland Cement Manufactory." Other large buildings were devoted, as I afterwards learned, to the fabrication of liqueurs which injure the internal organisation, and of soap to cleanse the outer one, as well as of many other things which are useful in their way, but which I did not expect to find amongst the productions of Heidelberg. At other German towns which used to have a rural aspect, the same outcrop of tall chimneys is visible; and, what is worse, clouds of smoke obscure and pollute what used to be a clear and pure atmosphere. This is notable at Cologne and Frankfurt; whilst there is the same visible and unattractive sign that Bonn, like Heidelberg, has become a manufactory of other things than men of learning. I am not about to discuss the question whether large factories are a blessing to civilisation. I have no objection to them; but I may fairly maintain that tall chimneys belching forth smoke spoil a landscape and darken a city. As the Germans are a much more practical people than used to be supposed, and as the police in Germany is as despotic as the police in France, it is strange that nothing should be done to abate the smoke nuisance; for, were that done, the factories would benefit the country without marring its beauties. I cannot better illustrate the change in this particular which has come over Heidelberg than by saying it is as great as would occur if the Links of St. Andrews were covered with factories.

Next to factories, the most conspicuous things in Heidelberg are hotels. In former days, three or four hotels sufficed for the accommodation of visitors. Many of the frequenters were students of the better class, who, if they did not live in them, regularly dined and supped there. These old houses were plain but comfortable; they have been rebuilt, redecorated, or enlarged without becoming more attractive to those who used to know them. They are certainly finer in all respects, and the charges have naturally kept pace with the style. But some of the new hotels overshadow the older ones, and are as grand buildings of their kind as any traveller can desire. They are to be found near the railway station, on the opposite side of the river, where no one ever dreamt of a hotel being built, and beside the castle itself, where one would still less have fancied that a site for a hotel would be chosen. That the opposite side of the river should have become in request for building sites is not surprising. Access to it is now easy by way of a fine new bridge, not far from the railway station, built about seven years ago, whilst the view from that side is by far the finer of the two. The Castle Hotel, perched on a spot close to and slightly higher than the castle itself, is a building which could well be spared. A villa behind it is as great an eyesore. Should building go on near the castle, the citizens of Heidelberg may have reason to regret it. It is easier to spoil than to preserve a fine prospect; and to destroy such a prospect as that presented by the ruined castle and its natural surroundings would be as great an act of vandalism as was the conversion of the majestic castle into a magnificent ruin. In bygone days there was little temptation to live at the castle. The view was worth the toil of ascending there, but the ascent was very steep, and was a hindrance to frequent walks thither. A wealthy and well-meaning Heidelberger recently left his fortune to the city to be employed in its improvement and embellishment, and with this money a new and easy road has been made to the castle, so that the ascent and descent can now be made with ease. For one person who formerly visited the castle ten do so now; indeed, during the tourist season there is a continuous stream of visitors going to and fro from the railway station to the castle. The temptation to build a hotel at the castle was increased by the existence of the new road; and it is not impossible that the road,

which seemed so great an improvement, may help to injure the most romantic part of Heidelberg.

Those who do not remember Heidelberg as it was, will not think its present aspect unpleasing; for, after all, the situation of the city is naturally so fine, that no change can seriously affect it. Lord Cockburn took credit to himself for preventing some changes being made which he thought would ruin the picturesqueness of Edinburgh; yet it is possible that Edinburgh would remain a beautiful and romantic city even if the alterations had been made which he successfully opposed. In like manner, Heidelberg has been the scene of changes which the admirers of its beauty predicted would be fatal to it. Quarter of a century ago the railway stopped here. It was proposed to continue it through the city and along the left bank of the Neckar. It was said that the charming Anlagen, in which some of the best houses stood, would be destroyed if the railway traversed that favourite quarter; yet the Anlagen remains attractive, notwithstanding the railway, which has really proved of great service and done no harm whatsoever. Perhaps, too, the new buildings near the castle, and even the factories near the railway station, may be less injurious to Heidelberg than may at first sight be supposed. It is quite certain that the citizens are growing richer. The new houses are far finer than the old ones; the shops are no longer like those of a country village. The primitive system of supplying the city with water and disposing of its sewage which used to prevail has been superseded by a modern one, which is far better adapted for preserving the health of the inhabitants. Indeed, the promoters of all the changes I have noted may boast of having rendered the city healthier; and to effect such a result no sacrifice, not even that of the picturesque, can be accounted too great. The walks and the views remain as they were. The prospect of the valley of the Neckar and of the long stretch of fertile plains, as seen from the castle terrace, has lost none of its charm, whether seen when the sky is bright and the whole is radiant with sunshine, or when clouds sweep across the sky and the horizon is lurid with an impending storm, or when the sun is rising or setting, or when the moonbeams are lending to the picture a weird yet placid beauty.

The river Neckar has not escaped the improver's hand, but the change made in it is not a conspicuous one. Its outward and visible mark is a line of vessels moving upwards or downwards at intervals, and drawn up-stream by a curious kind of steamer. This steamer has neither paddle-wheel nor screw-propeller. Yet she holds on her course steadily, drawing behind her a large number of heavily-laden barges. No such traffic used formerly to be seen on the river, and, I may add, no such noise used to be heard when vessels were towed up-stream by horses. The truth is, that a system of propulsion, which has been in use for some time on the Elbe and the Rhine, has been applied to the Neckar also. It consists of a chain laid in the bottom of the river, which is wound round a drum on board the steamer, and which enables the steamer to move up stream with its load. The revolving drum on board the steamer makes a considerable amount of noise, but this is not detrimental to the banks of the stream as the revolution of paddle-wheels or screw-propellers would be; so that the rattle of the chain is endured in consideration of the other advantages gained. A little ingenuity might serve to deaden the sound. Certainly no ingenuity is needed to lessen the noise of the steam whistle when one of these steamers passed under the bridge. The din is alike frightful and unnecessary.

### EMPLOYERS' LIABILITY IN SCOTLAND.

AN action was lately taken by a mason against a builder in Glasgow in which damages amounting to 200*l.* were claimed for injuries arising through the fall of scaffolding. The builder maintained that the scaffolding had been erected in the customary way, was of sufficient strength, and that the accident was not due to any negligence on his or his servants' part. Mr. Sheriff Guthrie, who heard the case, found for the defendant, with costs. The following note has been appended to the judgment:—Like many cases of reparation, this is a narrow and difficult one. The cause of the fall of the scaffolding upon which the pursuer was working remains a mystery, and the pursuer founds his claim of damages exclusively upon the fact that the accident occurred, and that the defender has not explained how it occurred, or, to speak more accurately, has not proved that it occurred from causes for which he cannot justly be held liable. It appears to me that this contention is founded on a misconception of the true import of various cases reported in late years, in which the Court sitting as a jury has given effect to the presumption of fault in a defender arising from the mere fact of an accident having happened. *Walker v. Olsen*, 1882, 9 D. 946, *Fraser v. Fraser*, 1882, *ib.* 896, are examples of such cases, of which there have now been a considerable number. It is not for me to say whether there has not been an undue tendency to report cases of this kind, which are truly cases of evidence, which in another country or in other times would have been decided by the verdict of a jury, or whether the expressions reported to have been used by the judges have not been too broad and general.



With regard to the latter point, I do not think that their language can be charged with inaccuracy when it is compared with the older authorities in our own law and in England, or that any new principle or presumption has been introduced other than that which has long been expressed in the brocard *res ipsa loquitur*, and been recognised in such cases as *Macaulay v. Buist*, 1846, 9 D. 245; and *Briggs v. Oliver*, 35 L.J., Ex. 163, and many others. But it is an extremely mischievous and altogether unauthorised assumption that that maxim is applicable to all cases where a defect in plant, machinery, or works belonging to a defender have caused injury to a workman or a stranger to the effect of throwing on the defender the burden of explaining away the accident in a manner consistent with his own innocence. The presumption is to be applied in a reasonable way, and with due regard to the facts of the particular case. The ground of action in all such cases is fault, the proving of which is normally the business of the pursuer, the party who affirms it. This is nowhere more clearly explained than it is by Lord Young in giving the leading judgment in *Grant v. Drysdale*, 1883, 10 R., 1,159, which deserves the more attention because it is for the most part to judgments of the second division that pursuers in this class of cases are accustomed to appeal. In all cases the first question is whether the occurrence of the accident in itself suggests or presumes that the construction of the building or scaffold, the manufacture of the machinery or plant has been defective, or that the defender has been negligent in maintaining or inspecting it. This is itself a jury question, and if it does not receive an affirmative answer as there is no presumption against the defender so there is no shifting of the onus which primarily lies upon the pursuer. In the present case I cannot think that the falling of a scaffolding which is proved to have been erected in the usual way and with ordinary care, and which had borne a much greater strain than was upon it when it fell, creates any presumption against the defender. The accident may have been due to various causes, involving no responsibility of the defender, such as a careless blow from a labourer, or an accidental displacement of a support by a falling stone; and while *Macaulay v. Buist* and other decisions show that a pursuer is not shut up to show the specific defect in such a case of reparation, they are quite in harmony with the leading principle that the circumstances must be such as *prima facie* at least to infer culpability on the part of the defender. I am not satisfied that there must have been fault on the defender's part, or even that it is more reasonable to infer such fault than not, and therefore I assolve the defender. Even if the decision on the main question were different, the pursuer could have recovered a very much smaller sum than he asks. I am not satisfied that the tender of 10% with small debt expenses was not sufficient to discharge any liability that could possibly exist. The pursuer has failed to adduce any evidence that his rib was broken, and he has apparently tried to rear up as heavy a claim against the defender as he could. My only doubt is whether the tender of small debt expenses in such a question as this should be sustained. I have no doubt that the pursuer could in no event have recovered a larger sum than might competently be sued for in the Small-Debt Court, but that is not an absolute test of the propriety of awarding Small-Debt Court costs.

### A PLUMBERS' CONFERENCE.

A MEETING of plumbers was held at the Guildhall, London, on September 26. Mr. Geo. Shaw, Master of the Plumbers' Company, presided, and in his address he said they had met there as representatives of the public as well as plumbers, and they wanted protection for themselves and families against the evils of bad plumbing. The protection of the public and the protection of the interests of the craft and trade of plumbing were virtually synonymous terms. The foundation of the Plumbers' Company rested on this sound basis. The ordinance of Edward III. provided, "That no one of the trade of plumbers shall meddle with works touching such trade except by the assent of the best and most skilled men in the said trade testifying that he knows how well and lawfully to do his work, that so the said trade may not be scandalised or the commonalty damaged and deceived by folks who do not know their trade." The ordinance further provided for good material being used. There was no trade or craft which so directly affected the public health as that of plumbers. The object of the proposed conference would be to give practical expression to the ordinance of the Plumbers' Company. That company comprised among its members men who, like himself, had worked with their own hands in every branch of the plumbing trade, and who had acquired their experience both as men and masters. In addition, the Plumbers' Company had among its members professional men and men whose social position enabled and entitled them to support the credit of the body and advance its usefulness. It was therefore in as good a state of efficiency now as at any previous time in its long history to perform its appropriate and legitimate functions for the fair protection of the public as well as for those who honestly followed the trade and craft of plumbers. The Court of the Plumbers' Company had given careful consideration to the various representations and

applications that had been made to them on the subject of the proposed conference; and it was right that he, as master of the company, should announce that they were willing to give their fullest aid in the advancement of the object. The object of this meeting would be chiefly to consider, first, the scope of the conference (he meant the subject to be considered); second, the date at which it should be held; third, the place of its meeting; and fourth, the organisation by which the needful arrangements might be carried out. He would suggest that there should be a general committee, who should give their influence and support to the object, and a small executive committee of gentlemen who could spare the time to attend to matters of detail. He hoped that when the conference met it would be well attended, so that the subject might be treated as broadly and made known as widely as possible. Opinions were expressed in favour of establishing a set of rules by which the trade could be more satisfactorily carried on. Resolutions were passed requesting the Plumbers' Company to communicate with the National Health Society, the Sanitary Institute of Great Britain, and others, with a view to arrange for a conference of metropolitan and provincial plumbers to be held at the Health Exhibition between October 15 and 20. A committee was appointed, and the following syllabus of subjects to be discussed at the conference was approved:—1. The technical instruction of plumbers. 2. Apprenticeship, the duration and condition of indenture suited to the present state of the plumbing trade, and to the modern system of technical instruction. 3. The establishment of metropolitan and provincial boards of examiners of plumbing work. 4. The registration of journeymen plumbers. 5. The suitability of materials used in plumbing, and particularly of those materials recently introduced as substitutes for lead. 6. The desirability of fixing upon a system by which uniformity in the quality of material used in plumbing may be insured. 7. The formation of district associations of plumbers to investigate and secure, as far as practicable, correction of evils and abuses arising in connection with the trade. 8. A general and executive committee to be formed for the purpose of receiving reports from district associations of plumbers and others, with a view to the preparation of a general report by the Plumbers' Company, to form the basis for an appeal to Parliament for necessary amendments and extensions of the law relating to plumbers' work under the Building and Health Acts and otherwise.

### RAILWAYS IN JAPAN.

THE total length of railways now open in Japan is 240 miles, the first line opened being that between Tokio and Yokohama, which is twenty miles in length, and was opened in 1872. This line, which has five intermediate stations, cost nearly 600,000%, and was constructed by English engineers. The line between Hiogo and Osaka was opened in 1874, but it has since been lengthened at both ends, and now runs from Kobe to Otsu, having a total length of more than sixty miles, and cost 7,000,000 yen. This line, which has sixteen intermediate stations, traverses the wealthiest provinces of the centre of Japan, and among the numerous articles which it conveys to Kobe and Osaka are silk, tea, cotton, rice, wheat, wadding, and cotton goods. It also carries inland the articles imported from abroad, and the native goods sent by sea to Kobe. This line, which stops short at Otsu, begins again at Nagahama, a town upon the opposite shore of Lake Biwa, and runs to the port of Tsuruga, upon the sea of Japan. The distance between the two places is twenty-seven miles. This line was opened for traffic in 1882, so that the whole of this part of Japan can be traversed by railway, except for the break at Lake Biwa, a service of steamers plying between the two termini. A third line has been constructed between Nagahama and Sekigahara and Ohogaki, its total length being fifty-seven miles. The terminus of Ohogaki, to which the line was extended on May 25, is the centre of the province of Mino, which is one of the busiest and most productive in Japan. The fourth line open is that which connects Tokio and Takasaki. The line was not commenced until June 1882, but by July of the following year the trains were already running as far as Kumagai, which is thirty-eight miles from the capital, and the line was completed to Takasaki this spring, when the Emperor opened it in person. The length of this line is about sixty-two miles, and it brings to Tokio large quantities of silk, tea, and tobacco from the different provinces. Two other lines are in course of construction; the first running from Shinagawa, upon the line from Tokio to Yokohama, to Kawagutchi, and the other from Takasaki to Mayebashi, one of the principal centres of the silk trade. The latter, only seven miles long, will be opened this autumn. Five other lines are about to be commenced:—First, from Urawa, upon the Tokio and Takasaki line, to Aomori, a town at the northernmost point of the island of Nippon (length 450 miles); second, from Takasaki to Ohogaki and Yokkaichi (length 200 miles); third, from Onyeda, in the province of Shinano, to Niigata (length 150 miles); fourth, from Osaka to Sakai (seven miles); and fifth, from Shizonoka to Shimidzu, in the province of Tsuruga (seven miles). A tramway from Tokio to Kōfū will also be made without delay.



## LUMBER TRADE OF THE UNITED STATES.

ACCORDING to one of the American journals, the lumber industry will, in all probability, in the course of ten years or so, be transferred from the Northern Lake region to the South. Some idea of the enormous extent of the industry may be gathered from the following figures:—In 1880 there were 25,708 lumbering establishments in the country, employing capital to the extent of 181,000,000 dols., and 146,000 hands, distributing 31,845,000 dols. per annum in wages, using 146,000,000 dols. worth of material, and turning out an annual product of 233,000,000 dols. Michigan ranks first, with a product of 52,449,000 dols.; then comes Pennsylvania, with 22,457,000 dols.; and then Wisconsin, with 17,952,000 dols.; New York, with 14,356,000 dols.; Indiana, with 14,160,000 dols.; Ohio, with 13,864,000 dols.; Minnesota, with 7,366,000 dols.; and Maine, with 7,900,000 dols. Very few of the Southern States reached a product of over 4,000,000 dols.; but then, on the other hand, Michigan is consuming its lumber at a fearful rate. Under the stimulus of a protective tariff, which prevents the importation of Canadian lumber, and offers a premium on the destruction of American forests, the magnificent pineries of Michigan and other States in the lake region are fast disappearing before the axe, and are being sawn into boards for building farmhouses and towns in the prairie regions of the West. But the whole South is a forest region, and, when the Northern lumber supply fails, the great saw-mills will be removed to the Southern forests, and these will become the new centres of the industry.



## The New Law Courts.

SIR,—There was a little skirmish at Birmingham the other day between two of the Presidents of the Social Science Congress as to the relative merits of Classic and Gothic architecture for meeting the social wants of the present day.

I will not attempt to show the fallacy of the idea that style has anything to do with the matter—with deficient lighting, imperfect ventilation, dark and tortuous passages, bad drainage, and so forth. I have a more important object in writing this letter, namely, to ask that a little more justice should be done to the memory of the late architect of the Royal Courts of Justice than, so far as I am aware, has ever yet been given in the criticisms of that building.

Though I am by no means sure of it, I am willing to admit that there are certain inconveniences that might possibly have been avoided; but I should like to ask if there be not others who ought to take their share of blame, instead of allowing all responsibility to rest upon one who has no power to defend himself. As in all other cases, so in the erection of this edifice, there was a building committee of a dozen or so of gentlemen specially trained in the use of the reasoning powers, and, by that fact alone, well qualified to assist the architect. Yet, so far as I have heard, none of these gentlemen have ever come forward to defend their architect, or themselves even, from unreasonable criticism, or to accept their share of responsibility if it was fair. They must have learned at the frequent meetings with him what immense difficulties the architect had to contend with in providing in as satisfactory a manner as possible such large accommodation upon such inadequate space—a problem still further complicated by the difference of levels of the surrounding streets. And yet, sir, not one of the committee have ever thought it necessary to come forward with a vindication or a protest against the criticisms of persons very partially informed of all these difficulties.

I venture to think that the death of Mr. Street just before these violent attacks appeared made it doubly incumbent that some such honourable step should have been taken. Perhaps if they should see this letter they may think it is not too late to dispense a little justice to one who is unable to defend his own cause.

As it is, every opportunity is taken to speak a word of depreciation as to arrangements which, however inconvenient, were probably unavoidable, and for which the architect was certainly not alone responsible.

Faithfully yours,  
EX-ARCHITECT.

**Competition.**—The old Baptist church in Bewick Street, Newcastle-on-Tyne, having been bought by the River Tyne Commissioners, a new site for more extensive buildings, to accommodate an aggregate of 1,500 persons, has been secured. Invitations were recently issued to eight architects, who have submitted plans in competition. The first premium of 50*l.* has been awarded to Mr. J. Cubitt, of London, who will be employed to carry out the works; the second, of 25*l.*, is awarded to Messrs. Clark & Moscrop, of Darlington; and the third, of 15*l.*, to Messrs. Thompson & Dunn, of Newcastle-on-Tyne.

## ENGINEERING WORKS.

**The Sea Defences of Sheerness.**—The great encroachment made by the sea on the shores of Sheerness and the Isle of Sheppey during the past few years is attracting considerable attention, as it is feared that unless something is soon done to put the sea defences in an efficient condition the inhabitants will run the risk of a serious inundation. The Sheerness Local Board of Health and the War Department authorities have recently spent between 30,000*l.* and 40,000*l.* in heightening the wall between Garrison Point Fort and Cheyney Rock; but beyond this point the sea defences are chiefly in private hands, and very little has been done to strengthen them against the alarming encroachments of the tide, which beats on the Sheppey shores with an uninterrupted flow from the North Sea. To meet the difficulty a meeting of the representatives of the War Department, the Ecclesiastical Commissioners, and the trustees of St. Katherine's Hospital, to whom a large portion of the property abutting on the sea belongs, has been held, at which it was decided to apply to the Crown for the appointment of a Commission of Levels, with power to take over the sea defences of the whole of the Isle of Sheppey, and to levy rates upon the occupiers of property, in proportion to the risks they incur, to maintain the same in an efficient condition. In the upper portion of the Isle of Sheppey the sea has made great ravages, large portions of cultivated lands having at times fallen into the sea through the undermining action of the tide combined with land springs. Some years ago it was suggested that convict labour should be utilised in the construction of a wall in front of the cliffs to prevent this continual loss of land, but nothing came of it.

## WORKS IN PROGRESS.

**The American Elevator Company**, of 38 Old Jewry, E.C., have just been awarded the contract for one of their "Standard" hydraulic passenger lifts, to be erected in the private residence of Louisa, Lady Ashburton, at Knightsbridge. This lift will be run in the stair wall, and the car will be made of mahogany, finished both inside and out, and upholstered with leather. The sides will be of glass, so that in ascending and descending the view of the house will be unobstructed. As there will be no ram protruding when the car is ascending, and as the decorations of the car are to be in harmony with those of the house, the presence of the lift in so conspicuous a place will not detract from the ornamentation of the residence.

**Messrs. Archibald Smith & Stevens**, of Queen's Road, Battersea, have just completed two sets of hydraulic lifting machinery, in connection with the Hydraulic Power Company's mains, one at Messrs. Spencer Wickes & Co.'s new premises, Watling Street, E.C.; and the other at Mr. A. Steddall's premises, Addle Hill, E.C.

**Ventilation of Churches.**—Messrs. Robert Boyle & Son, of 64 Holborn Viaduct, and Glasgow, have recently applied their patent self-acting air-pump ventilators and system of ventilation to the following churches:—St. Giles's Church, Soho; Palmerston Road Church, E.; Congregational Church, Burdett Road, E.; New Church, Hornsey Road; Wesleyan Chapel, Gillespie Road, N.; Baptist Chapel, Plymouth; Independent Chapel, Ilfracombe; Congregational Church, Brighton; Wesleyan Chapel, Combmartin, Devon; Christ Church, Mirfield; Mount Zion Chapel, Sheffield; Strood Church, Kent; New Methodist Chapel, Cobridge, Burslem; Carr's Lane Chapel, Birmingham; Greystones Parish Church, county Wicklow; St. Paul's Church, Bedford. Messrs. Boyle have also just completed the ventilation of St. Matthias Church, Earl's Court, for Mr. Arthur W. Blomfield, architect, for whom they have also recently ventilated the chapel of Emmanuel College, Cambridge; St. John's Church, St. Leonards; and St. Michael's Church, Paddington. Plans have also been furnished for the ventilation of St. Mary Redcliffe, Bristol. Messrs. Boyle have received the following valuable testimonial from Mr. Blomfield:—"I have used the air-pump ventilators of Messrs. Robert Boyle & Son, with satisfactory results. I believe the system to be a sound and good one, and capable of varied application with success. (Signed) ARTHUR W. BLOMFIELD."

## CHURCH BUILDING AND RESTORATION.

**Clitheroe.**—A Lady Chapel, which has been constructed on the right-hand side of the principal altar, has just been opened at the Clitheroe Catholic church. It is elaborately designed, but in the main features it harmonises with the architecture of the church. The floor is formed of mosaic work, marble, and alabaster, and the pillars, arches, &c., of the chapel are of marble. Mr. S. J. Nicholl, of London, is the architect, and the work has been done by Mr. Anstey. On the right-hand side of the entrance there is an alabaster statue of the Blessed Virgin, and within the chapel there are three paintings by Mr. Joseph Bouvier, portraying incidents of her life. The first one, on the background beneath the altar, represents the tomb of Our Lady and the ten apostles showing St.



Thomas where her body had been laid, and the flowers in the empty tomb. Behind the altar is a picture of the Assumption, and higher still there is the representation of the Coronation.

**Leicester.**—The Charles Street chapel has been reopened after undergoing renovation. Additional ventilation has also been provided, and the heating apparatus has been put in good working order. The whole of the interior work has been executed in pitch pine. Messrs. Redfern & Sawday, A.R.I.B.A., of New Street, Leicester, were the architects for the work, and Messrs. Sharp & Sons, of Queen Street, the contractors.

**Richmond.**—A Congregational church has been opened at Richmond. The buildings comprise church and chancel, recess for organ, with present accommodation for 250 persons; deacons and minister's vestries, school for 150 children, lobbies, and the usual outbuildings. Mr. W. Shaw, of Richmond, is the contractor for mason and plasterer's work; Mr. H. Harwood, of Manfield, for joiner's work; Messrs. R. Spence & Co., of Richmond, for iron-work and heating; Mr. J. Wanless, of Darlington, for slater's work; Mr. C. Fryer, of Richmond, for plumbing, &c.; Mr. Stevenson for painter's work. The architects are Messrs. Clark & Moscrop, of Feethams, Darlington.

### NEW BUILDINGS.

**Conservatory Building.**—The Mayor of Bradford has just added a spacious conservatory to his residence at Daisy Hill, Bradford. The conservatory may be described as a rectangle, 40 feet long by 25 feet wide. The fronts are treated in a substantial and effective manner by means of pilasters and ornamental ironwork in the upper part. The roof is of one span of domical form, surmounted by a lantern; a little ornament has been introduced in the shape of lead lights of delicate tints of cathedral glass. All the latest improvements in ventilating tackle and internal fittings have been introduced. The heating is by Messenger's patent elastic-jointed pipes, which, owing to the facility with which the joints are made or taken apart, are having a large sale for heating buildings of all kinds. The whole work has been designed and carried out by Messrs. Messenger & Co., horticultural builders, of Loughborough.

**Leamington Town Hall.**—This building was opened lately. It has been erected at a cost of over 16,000*l.* from the designs of Mr. John Cundall. The site cost 5,300*l.* There is a court-house measuring 80 feet by 40 feet, which is ventilated by Boyle's system, and a council chamber measuring 50 feet by 30 feet, which has stained-glass windows. The style is Renaissance. Mr. Fell was the builder.

### SCHOOL BUILDINGS.

**Burton-on-Trent.**—A Baptist Sunday-school has been opened. The building is two storeys high, the ground floor being apportioned in ten classrooms, with lavatories, &c. The upper floor is a large room capable of seating between 400 and 500 children, and adjoining are secretary's and librarian's rooms. Mr. Mills, of Derby, was the architect, and the work has been carried out under his supervision by Messrs. Lowe & Sons, the sub-contractors being Mr. Adams, Horninglow, for woodwork, and Messrs. Pickering Brothers for plumbing, painting, &c. The cost is about 1,600*l.*

**Coventry.**—New schools for St. John's parish have been erected from the designs of Mr. N. W. Vickers, architect, of Liverpool, by Mr. C. Haywood, jun., builder. The building is intended to accommodate 500 children—boys, girls, and infants.

**Erdington.**—The memorial-stone of a school to be erected at Erdington by the Aston School Board has been laid. Mr. E. R. Robson, F.S.A., adjudicated in the competition, and out of six designs sent in that of Messrs. Henman & Timmins, of Bennett's Hill, Birmingham, was selected. Mr. W. Bennett, Lozells, obtained the tender for building the school at a cost of 3,277*l.* The school is arranged in two departments, one for 160 boys, another for 240 girls and 60 infants. The classroom system has been adopted. In addition to separate classrooms the general schoolroom for each department is capable of being easily subdivided into classrooms by an arrangement of screens. The elevations are in plain and moulded brickwork, substantial and distinctive in appearance.

**Faversham.**—The memorial-stones of a Wesleyan infant-school, which is to be erected in Salomon's Lane, Faversham, have been laid. Mr. Fuller is the builder, and Mr. Dawson the architect.

**Rushden.**—Baptist Sunday-schools, erected from the designs of Mr. Edward Sharman, of Wellingborough, have been opened. The gable front is built of Leicester brick, with Bath stone dressings; the rest of the building being of ordinary red brick, relieved with stone dressings. It is roofed with Bangor slates and ornamental ridge tiles. The contractors for the building were Messrs. C. & W. Bayes, Foskett, Rushden. Mr. W. Woodward, Rushden, executed the plumbing and glazing work, and Mr. A. Marriott, Higham Ferrers, supplied the heating apparatus. Boyle's patent ventilating apparatus is used. The building cost between 1,000*l.* and 1,100*l.*

**Walsall.**—The foundation-stone of a Sunday-school and mission-room in connection with St. George's Church, Walsall, has been laid. The building will be erected from the designs of Mr. H. E. Lavender, of Walsall, and the cost will be about 1,000*l.*

**Wantage.**—National day and Sunday-schools have been opened. The buildings have been erected by Mr. John Wheeler, contractor, from the designs of Mr. A. B. Allin. The buildings are of brick with stone dressings.

### GENERAL.

**The Duke of Portland** will open the Kilmarnock Art Exhibition on December 9. Several artists have promised to contribute works to the exhibition.

**The Eighth Annual Fine Art Exhibition** opens in Dundee to-day (Saturday).

**Mr. Charles Webb**, ironmaster, Tettenhall Road, Wolverhampton, has intimated his intention of presenting to the Wolverhampton Corporation Eugene de Blaas's picture, *At the Carnival*.

**The Bewick Club** intend to hold another exhibition of works of art in the early months of next year.

**Mr. James Loft**, who was for a long time curator of the antique school in the Royal Academy, died in London on September 21.

**The National Association for Promoting Technical Education** has appointed a deputation to visit the Continent for the purpose of reporting upon the technical instruction given to the industrial classes in Germany, France, Switzerland, and elsewhere, and the influence of such instruction upon manufacturing and other industries at home and abroad.

**Mr. Thomas W. Cutler** is, we regret to learn, lying seriously ill at his house in Queen Square, Bloomsbury.

**The Alexandra Palace** at Muswell Hill is to be reopened in March as "the World's International Exhibition," under the management of Mr. G. C. Levey.

**The Council Chamber** lately constructed at the Guildhall was opened on Thursday.

**A Congregational Church** at Balham, erected from the designs of Messrs. Searle & Hayes, of Ludgate Hill, was opened on Wednesday.

**The Inner Circle Railway**, now completed, which was opened on Wednesday for experimental traffic, will be opened to the public on Monday.

**The Leeds Town Council** on Wednesday decided to purchase thirty acres of land, at a cost of 12,000*l.*, for the purposes of a recreation ground in Wortley.

**The New South Wales Government** have proposed to the Legislative Assembly to construct 1,490 miles of railway, at a total estimated cost of 14,000,000*l.*

**The Council House** at Salisbury was on Saturday last the scene of a malicious explosion, but no trace of the offenders has been discovered. The principal damage was the destruction of glass. The building was erected in 1794.

**The Health Committee of the Liverpool Corporation** recommend the appropriation of 25 acres of Wavertree Park as a site for a hospital for infectious diseases. They recommend the erection of a series of buildings with a wide belt of land and trees to secure isolation.

**A New Opera House** was opened in the Radial Strasse, Pesh, on Sunday last. It was designed by M. Ybl, and has been constructed at the cost of the Emperor of Austria.

**Messrs. W. B. Wilkinson & Co.**, granite concrete paviors, &c., of Newcastle and London, have removed their London office from 27 Great George Street, Westminster, S.W., to 13A Great George Street, Westminster, S.W.

**Messrs. Robey & Co.**, of the Globe Works, Lincoln, have been awarded the highest award at the Crystal Palace International Exhibition—viz., diploma of honour for their patent "Robey" winding engine, compound Robey engine, and other machinery.

**A Tender** by Messrs. Bull & Sons, amounting to 79,000*l.*, for the construction of a convalescent scarlet-fever asylum at Winchmore Hill, has been accepted by the Metropolitan Asylums Board.

**The Glasgow Masons**, after a strike of eight weeks, have resumed work at the old rate of 7*d.* per hour. The master masons have agreed to consider whether an advance can be given in the spring of 1885.

**Mr. William Scott**, an architect and builder in Arbroath, died on Saturday last. He was fifty-four years of age. He was architect to the Burgh School Board, and in that capacity he prepared the plans for the Hill School, the large addition to the Abbey School, and the additions to Inverbrothock and Parkhouse Schools, doing also the work of builder. He designed and built the new Guild Hall, the Drill Hall, and St. Mary's Hall, attached to St. Mary's Episcopal Church, in Arbroath. He built the Public Hall Buildings, the Bank of Scotland branch office, and St. Margaret's Church, but without being the architect of these structures.









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# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, OCTOBER 4, 1884.

### ADVERTISEMENT SCALE.

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### COMPETITIONS OPEN.

BOMBAY.—Nov. 6.—The Municipal Commissioner of Bombay invites Designs and Estimates for a New Municipal Hall and Offices, which must be sent to his Office by Twelve noon, on Nov. 6. A Premium of 5,000 rs. will be given for the Design most approved of by the Commissioner, with the assistance of a Committee of the Corporation; 3,000 rs. for the second, and 2,000 rs. for the third. The total cost of the buildings is not to exceed 5 lacs (5,00,000 rs.). Mr. E. C. K. Ollivant, Municipal Commissioner's Office, Bombay, or at Messrs. E. W. & R. Oliver, 1 Corbet Court, Gracechurch Street, London.

EGHAM.—Oct. 11.—Designs are invited for the Erection of a School to accommodate 320 Children. Mr. Benjamin Tice, Clerk to the School Board, Irene Villa, Egham.

### CONTRACTS OPEN.

ARNSIDE.—Oct. 9.—For Building Marine Residence. Mr. Stephen Shaw, Architect, Kendal.

ASHBURTON.—Oct. 11.—For Building Coach-house, Stables, and other Buildings. Mr. G. E. Allen, Southern House, North Huish, Ivybridge.

BANGOR.—For Building Five Houses. Mr. J. Boyd, 9 Donegall Square West, Belfast.

BARCOMBE.—Oct. 9.—For Building Four Houses and Shops and Nine Cottages. Mr. George Fuller, Architect, School Hill, Lewes.

BELFAST.—Oct. 14.—For Building Two Dwelling-houses. Messrs. Young & Mackenzie, Architects, 7 Donegall Square East, Belfast.

BROUGHTON-IN-FURNESS.—Oct. 14.—For Additions to Dwelling-house for a Police Station. Mr. J. W. Grundy, Architect, Brogden Street, Ulverston.

BRADFORD.—Oct. 13.—For Building Railway Goods Offices. The Engineer, Hunt's Bank, Manchester.

CHESTER.—Oct. 6.—For Building Recreation and Work-rooms at the County Asylum, Upton. Mr. T. M. Lockwood, Architect, 80 Foregate Street, Chester.

CHERTSEY.—Oct. 6.—For Additions to Post Office. Mr. Charles Welch, Architect, Chertsey.

COCKERMOUTH.—Oct. 8.—For Additions to Hotel. Mr. J. Fearon, Secretary Farmers' Auction Company, Cockermouth.

DARLINGTON.—Oct. 6.—For Building Board Schools, Beaumont Street. Mr. F. W. Brooks, Architect, 40 High Row, Darlington.

DUNDEE.—For Building Board School at Butterburn. Mr. D. Maclaren, Architect, 81 Murraygate, Dundee.

FARNBOROUGH.—For Execution of Sewerage and Out-fall Works, and Supplying and Laying Cast-iron Pipes. Mr. F. S. Chandler, Odiham, Hants.

GATESHEAD.—Oct. 4.—For Building St. Edmund's Church School. Messrs. Newcombe & Knowles, Architects, 89 Pilgrim Street, Newcastle-on-Tyne.

GORLESTON.—For Building Three Houses and Shop, Pier Road. Mr. H. Dudley Arnott, Architect, High Street Gorleston.

LONG LAWFORD.—Oct. 15.—For Building Branch Co-operative Store and Storekeeper's House. The Manager, Co-operative Society, Rugby.

LYME REGIS.—Oct. 25.—For Reseating Parish Church, Building Vestry, &c. Mr. R. W. Hillman, Solicitor, Lyme Regis.

NORTHUMBERLAND.—Oct. 6.—For Additions and Alterations to Hoppin and Glororum Farm Buildings, Spindleton Estate. Messrs. Austin & Johnson, Architects, 3 Arcade, Pilgrim Street, Newcastle-on-Tyne.

NOTTINGHAM.—For Building Bank Premises. Messrs. Evans & Jolly, Architects, Eldon Chambers, Nottingham.

OLDHAM.—For Re-erecting Mill. Mr. Sidney Stott, Architect, 3 Clegg Street, Oldham.

PADDINGTON.—Oct. 15.—For Alterations and Additions, to Mortuary Buildings. Messrs. Higgs & Rudkin, Architects, 44 Bedford Row, W.C.

PENNAN.—Oct. 4.—For Building Church. Messrs. Ellis & Wilson, Architects, 34 Bridge Street, Aberdeen.

STALYBRIDGE.—For Drill Hall, Armoury, Offices, &c., Mr. Gregory Gill, Architect, Gillmoor, Stalybridge.

ST. HELEN'S.—Oct. 4.—For Alterations and Additions to Town Hall. Mr. Edmund Kirby, Architect, 5 Cook Street, Liverpool.

SUNDERLAND.—Oct. 6.—For Boundary Walls, Iron Palisading, &c., for Cemetery Extension. Mr. D. Balfour, C.E., Houghton-le-Spring.

SWANSEA.—Oct. 4.—For Building Temperance Hotel. Mr. T. P. Martin, Architect, Heathfield Street, Swansea.

WATFORD.—Oct. 14.—For Building Post Office. H.M. Office of Works, 12 Whitehall Place, S.W.

WEST HARTLEPOOL.—For Building St. Paul's Church. Mr. C. R. Fowler, Architect, The College, Durham.

WHITEHAVEN.—Oct. 7.—For Rebuilding No. 6 King Street. Mr. J. S. Moffat, Architect, Whitehaven.

WHITEHAVEN.—Oct. 10.—For Building Six Houses (Masons' Work excepted). Mr. McWhinney, Bransty, Whitehaven.

### TENDERS.

#### ASCOT.

For proposed Shop for Mr. J. Pither, Ascot. Messrs. BYRNE & WILMOT, Architects, 303 Strand, and Windsor.

Watson, Ascot	£406 0 0
Charman, Ascot	381 0 0
Walker, Ascot	342 0 0
NORRIS, Winkfield (accepted)	323 0 0

For Shop for Mr. Hobbs, Ascot. Messrs. BYRNE & WILMOT, Architects.

CHARMAN (accepted) £500 0 0

#### ASTON.

For Building Eleven Houses at Aston, near Rotherham Mr. G. T. EDWARDS, Architect.

Holmes	£2,340 0 0
Rodley & Sons	2,269 0 0
Greenwood	1,959 0 0
Ashwood	1,900 0 0
Bumby	1,859 0 0
Alfiat	1,830 0 0
Lake	1,787 0 0
Earnshaw	1,760 0 0
Eyre	1,610 0 0
GREEN, Rotherham (accepted)	1,582 0 0
Sykes	1,400 0 0

#### AUDENSHAW,

For Sewering and Draining Croft Street, for the Audenshaw Local Board. Mr. J. H. BURTON, Surveyor, Ashton-under-Lyne.

JONES & HILTON, Hooley Hill (accepted per schedule).

#### BROXWOOD.

For Building Church and Presbytery at Broxwood, near Pembridge, Herefordshire. Mr. CHARLES F. HANSOM, F.R.I.B.A., Architect, Clifton, Bristol. Quantities supplied.

Bullock & Co., Wellington, Salop	£2,738 0 0
Sandford, Letton	2,725 0 0
Wilkins, Bristol	2,710 0 0
Morgan, Kingston	2,539 0 0
Edwards, Leominster	2,477 0 0
Perrott, Bristol	2,294 0 0
Williams, Knighton	2,218 7 0
WELSH, Hereford (accepted)	2,200 0 0

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**BARKING.**

For Sewerage Works, Barking. Mr. B. S. BRUNDELL, Doncaster, and Mr. C. J. DAWSON, Barking, Joint-Engineers.

Argent, Barking	£3,447	0	0
Cornish, Enfield	2,000	0	0
Jackson, Leytonstone	1,884	0	0
Stewart, Southend	1,818	3	8
Cardus, Acton	1,818	0	0
Bottoms	1,763	0	0
Simpson, Bow	1,738	11	7
Wood, Chelmsford	1,723	0	0
Beadle Bros., Erith	1,718	0	0
Hawkins, Mile End	1,689	0	0
Maycroft	1,665	0	0
Smith	1,585	0	0
Catley	1,544	0	0
Pell & Son	1,435	0	0
Cook & Co., Battersea	1,425	0	0
Nicholson, Southend	1,384	0	0
Saunders	1,248	0	0
Neave, Stratford	1,116	0	0
Surveyor's Estimate	1,810	7	8

**BIRKENHEAD.**

For Painting Ornamental and Inner Railing Gates, &c., at the Birkenhead Park. Mr. T. C. THORBURN, Borough Surveyor.

Getty	£306	17	6
Aitchison	269	3	5
Legge, Son & Co.	258	0	0

**CAMBRIDGE.**

For Building Hospital for the Cambridge Improvement Commissioners. Mr. W. J. BOWYER, Architect.

Redding & Son, Cambridge	£1,447	0	0
Pamphilon, Cambridge	1,400	0	0
Apthorpe, Cambridge	1,370	0	0
Kerridge & Son, Cambridge	1,248	0	0
Willmot & Son, Cambridge	1,182	14	6
Alderton, Cambridge	1,150	0	0
Kidman, Cambridge	1,150	0	0
Unwin, Cambridge	1,143	7	6
Yarrow, Cambridge	1,109	0	0
SAINT, Cambridge (accepted)	1,076	0	0
Mills, Chesterton	1,051	18	9

**COLCHESTER.**

For Painting at the Workhouse, Colchester.

Johnson	£275	0	0
Cole	87	15	0
Mills & Son	60	0	0
Dodd	58	0	0
Peek	50	0	0
LEWIS (accepted)	40	0	0

**CROYDON.**

For Alterations and Additions to Vagrant Wards at the Workhouse, Queen's Road, Croydon. Messrs. BERNER & MONDAY, Architects. Quantities by Messrs. Franklin & Andrews.

Hann & Co.	£4,293	0	0
Hill Bros.	4,198	0	0
Howe & White	4,070	9	3
Parker	4,000	0	0
Longley	3,895	0	0
Taylor & Son	3,834	19	9
Sedgwick	3,845	0	0
Sanders	3,813	0	0
Smith & Bullied	3,789	0	0
Howell & Son	3,725	0	0
Dean	3,667	0	0
Jones	3,629	0	0
Stephenson	3,565	0	0
Higgs	3,490	0	0
Potter	3,298	0	0

**GLYNCORRWG.**

For Building Board Schools, Glynccorwg. Mr. A. LLEWELLYN BATCHELER, Architect. Quantities by the Architect.

D. J. Davies, Cardiff	£3,280	0	0
Rees, Ystalyfera	3,260	0	0
Jones, Gloucester	3,240	0	0
D. Davies, Cardiff	2,975	0	0
George, Britten Ferry	2,600	0	0
James, Bridgend	2,500	0	0
Thomas, Neath	2,260	0	0

For Building School at Cymmer for the Glynccorwg School Board. Mr. A. LLEWELLYN BATCHELER, Architect. Quantities by the Architect.

D. J. Davies, Cardiff	£2,120	0	0
Jones, Gloucester	2,120	0	0
D. Davies, Cardiff	2,050	0	0
Rees, Ystalyfera	1,995	0	0
James, Bridgend	1,500	0	0
Rees, Maestey	1,378	0	0
Thomas, Neath	1,310	0	0

**GREAT YARMOUTH.**

For Erection of Queen's Hotel, Great Yarmouth. Mr. ARTHUR J. LACEY, Architect, Norwich.

Leggett	£6,603	0	0
Downing & Sons	6,600	0	0
E. Howes	6,261	0	0
Lacey	6,123	0	0
Wilkin & Wilkins	5,946	0	0
G. E. Howes	5,893	0	0
CORK & BEECH (accepted)	5,878	0	0

Gas and Bells.

Pank & Son	194	0	0
Payne & Co.	179	17	0
BLY & SILL (accepted)	174	10	0

Cooking and Heating Arrangements.

Bly & Sill	89	19	0
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**HULL.**

For Iron Roofing to Baths, Madely Street, Hull.

Wright & Son	£370	0	0
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**GUILDFORD.**

For Building Small House at Sand Tannery, Guildford. Messrs. PEAK, LUNN, & PEAK, Architects, Guildford.

Downes, Guildford	£478	0	0
Whitburn, Woking	475	10	0
Christmas, Ripley	460	0	0
Shears, Woking	398	0	0
Banham, Stoughton	357	10	9
Wilson, Woking	313	0	0

**IPSWICH.**

For Building Infants' School, Rose Hill, Ipswich, for the Ipswich School Board. Mr. E. F. BISSHOPP, Architect.

Graystone	£1,885	0	0
Kenney	1,680	0	0
Thwaites	1,640	0	0
SMITH (accepted)	1,393	12	6
Wyatt	1,196	10	0

**LEWISHAM.**

For Rebuilding the Black Bull Tavern, High Street, Lewisham, S.E., for Mr. G. Shaw. Mr. HORACE T. BONNER, A.R.I.B.A., Architect, Lewisham.

Major	£1,147	0	0
Amer	1,100	0	0
Staines & Son	1,066	0	0
Jerrard	1,043	0	0
Kirk	997	0	0
Hubble & Trott	996	0	0
Burman	987	0	0
Holloway	975	0	0

**LIVERPOOL.**

For Patent Heating Apparatus at Conservatory, St. Asaph, North Wales.

RENTON GIBBS, Liverpool (accepted).

For Erection of Patent Heating Apparatus at the School of Art, Stourbridge.

RENTON GIBBS, Liverpool (accepted).

For Fitting-up Patent Hot-water Heating Apparatus at Colonel Dakeyne's, Clarendon Square, Leamington.

RENTON GIBBS, Liverpool (accepted).

**LONDON.**

For Alterations to the Builder's Arms, Pentonville. Mr. R. A. LEWCOCK, Architect.

Backholder	£1,093	0	0
Auley	855	0	0
Shurmur	945	0	0
Toms	873	0	0
Oldis Bros.	850	0	0
Jackson & Todd	795	0	0

For Rebuilding Nos. 6 and 6A Oxford Market, for Mr. J. A. MICHELL, Mr. W. J. MILLER, Architect.

Conder	£3,777	0	0
Bangs & Co.	3,657	0	0
Patman & Fotheringham	3,573	0	0
Nightingale	3,422	0	0
Scrivenor	3,369	0	0
Manning	3,350	0	0

For Six Warehouses on Site of the Old Sion College, namely, One in London Wall, One in Philip Lane, and Four in Aldermanbury Avenue, for Mr. P. CHARLES. Mr. G. VICKERY, Architect. Mr. H. H. LEONARD, Surveyor.

Colls	£19,186	0	0
Kilby	18,904	0	0
Conder	18,679	0	0
Brass	17,993	0	0
Ashby Bros.	17,920	0	0
Grover	17,504	0	0
Greenwood	17,021	0	0
Lawrance	16,609	0	0
Morter	16,581	0	0
Nightingale	16,551	0	0

For Building Board School, Queen's Head Street, Walworth. Mr. E. R. ROBSON, Architect.

L. B. & R. Roberts	£13,667	0	0
Greenwood	13,550	0	0
Goodman	13,550	0	0
Downs	13,476	0	0
Bangs & Co.	13,326	0	0
Scrivenor & Co.	13,229	0	0
Williams & Son	13,055	0	0
Holloway	12,990	0	0
Shurmur	12,978	0	0
Stimpson & Co.	12,969	0	0
Lawrance	12,953	0	0
Jerrard	12,933	0	0
Perry & Co.	12,915	0	0
Wall	12,850	0	0
Grover	12,846	0	0
Lathey Bros.	12,787	0	0
Wall Bros.	12,745	0	0
Johnson	12,700	0	0
Atherton & Latta	12,700	0	0
Cox	12,460	0	0
Hunt	12,389	0	0
Hobbs	11,493	0	0

For Building Board School, Edward Street, Deptford, Girls and Infants' Departments. Mr. E. R. ROBSON, Architect.

Hobbs	£11,400	0	0
Turtie & Appleton	11,094	0	0
Grover	10,567	0	0
Cox	10,556	0	0
Stimpson & Co.	10,535	0	0
Scrivenor & Co.	10,520	0	0
Downs	10,484	0	0
Wall Bros.	10,462	0	0
Atherton & Latta	10,400	0	0
Bangs & Co.	10,340	0	0
Wall	10,330	0	0
Hart	10,300	0	0
Lathey Bros.	10,232	0	0
Johnson	10,182	0	0
Kirk & Randall	10,114	0	0
Jerrard	10,039	0	0
Oldrey	10,000	0	0
Holloway	9,861	0	0

**LONDON—continued.**

For Erecting One Warehouse, corner of London Wall and Philip Lane, for Messrs. Barnett & Phillips. Mr. G. VICKERY, Architect. Mr. H. H. LEONARD, Surveyor.

Kilby	£5,391	0	0
Colls	5,375	0	0
Conder	5,245	0	0
Ashby Bros.	5,093	0	0
Brass	5,011	0	0
Grover	4,953	0	0
Greenwood	4,853	0	0
Lawrance	4,758	0	0
Morter	4,715	0	0
Nightingale	4,684	0	0

**MAYBOLE.**

For the Construction of Sewers in the Burgh of Maybole. Mr. R. C. BRENNER, Engineer, Edinburgh.

Brodie, Greenock (too late)	£1,604	12	10
Pollock, Glasgow	1,317	2	4
J. & W. Osborne, Ayr	1,089	17	5
Calderhead & Co., Dumfries	1,037	10	8
McDonald, Lugar	1,014	0	0
J. W. & G. Stratton, Edinburgh	991	11	3
Sinclair, Perth	988	9	4
Clelland, Ayr	953	18	8
Pearson, Kilmarnock	902	13	0
Law & Co., Dunbocher	894	8	4
Drysdale, Glasgow	891	7	3
WORTH & STRACHAN, East Wemyss (accepted)	826	0	0

**NEW BASFORD.**

For Pulling Down and Rebuilding Raven Inn, Rawson Street, New Basford, for Mr. W. Maltby. Mr. H. WALKER, Architect.

Dudson & Parish	£1,369	13	9
Hind	1,317	0	0
Woolf Bros.	1,270	0	0
Bell & Son	1,260	0	0
Vickers	1,253	0	0
Morrison	1,240	0	0
Price	1,230	5	0
Wheatley & Maule	1,220	0	0
Brownsell	1,220	0	0
S. & J. Cargill	1,200	0	0
Scott	1,179	0	0
Bains & Turton	1,170	0	0
Taylor	1,122	10	0
Bailey	1,097	0	0
NOBLE (accepted)	1,089	0	0

All of Nottingham.

**NOTTINGHAM.**

For Building Police Lodge and Boundary Walls, &c., adjoining new Reservoir, Mapperley Plains Road, Nottingham. Mr. T. O. TARBOTTON, C.E.

Highest Tender	£1,645	0	0
Lowest Tender	1,274	0	0
ATTENBOROUGH, Nottingham (accepted)	1,455	0	0

For Building Smiths' Arms Inn and Four Sale Shops with Dwellings-houses, Radford Road, Hyson Green, Nottingham, for Mr. J. ROBINSON. Mr. H. WALKER, Architect.

Woolf Bros.	£3,200	0	0
Lynam & Kidd	3,185	0	0
Bell & Son	3,114	0	0
Bains & Turton	3,100	0	0
Scott	3,050	0	0
Vickers	3,045	0	0
Hind	3,021	0	0
Wheatley & Maule	3,020	0	0
Adams	3,000	0	0
Saddler	2,997	10	0
Bailey	2,996	0	0
Noble	2,940	0	0
Price	2,860	0	0
Ireson, Wade & Gray	2,775	0	0
Stainforth Bros., Hucknall Torkard	2,765	5	4
Houldsworth, Hucknall Torkard	2,746	13	10
CUTBERT BROS. (accepted)	2,620	0	0

**OLDHAM.**

For Rebuilding the Gardeners' Arms Beerhouse, Oldham. Mr. J. H. BURTON, Architect, Ashton-under-Lyne.

WILKINSON, Rochdale (reduced and accepted)	£500	0	0
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Eleven Tenders were received.

**OTTERSASH.**

For House for Rev. Baron Hichens, Ottersash. Messrs. BYRNE & WILMOT, Architects.

HINE, Thorpe (accepted)	£905	0	0
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For Children's Home for Mrs. Molyneux, Goldingham, Ottersash. Messrs. BYRNE & WILMOT, Architects.

HINE, Thorpe (accepted)	£875	0	0
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**STRATFORD-ON-AVON.**

For Construction of Reservoir and Filter Beds, Brick Conduit, Adit, Cottage, Laying Pipes, &c., in connection with the Waterworks (Contract No. 4), Stratford-on-Avon. Mr. E. PRITCHARD, C.E., Engineer, Westminster and Birmingham.

Hilton & Son, Birmingham	£23,170	0	0
McCrea & McFarland, Westminster	20,455	4	5
Evans Bros., Wolverhampton	17,600	0	0
Cooke & Co., London	16,700	0	0
Currall & Lewis, Birmingham	16,300	0	0
Jeavons, Dudley	15,282	18	3
LAW, Kidderminster (accepted)	14,077	0	0

**SUTTON.**

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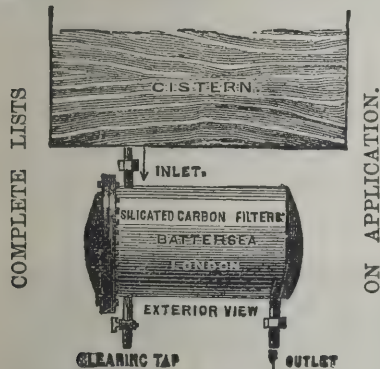
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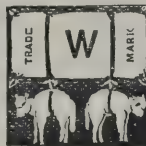
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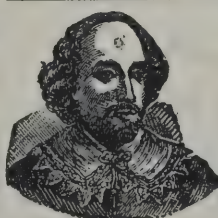
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# The Architect.

## THE ATMOSPHERE OF ART.



AN observation was made at the recent Birmingham meeting which could scarcely fail to produce an impression, namely, that one of our leading firms of calico-printers employ English designers, but send them to live in Paris for the sake of what we may call artistic air; "they find by experience that life amidst inartistic and unsympathetic surroundings chills and blasts their designing powers." There are some who will pooh-pooh this. There are many who will be unable to understand it. But there are others—and their number is happily increasing daily—who will recognise, not only the force of the statement as part of an interesting argument, but the still more interesting principle which it illustrates.

The importance of congenial associations has always been acknowledged in professional life. It is not merely that birds of a feather flock together, although even in that less elevated manifestation of human nature the principle at work is one of the same kind. In clerical, legal, medical, military, and naval life, for instance, it is well known that there is in professional society a certain peculiar sympathy which not only stimulates the mind to exertion in the one particular direction, but constitutes the very life-blood of professional existence in its practical form. Even in commerce, in spite of open competition on one hand and private suspicion on the other, there is a sense of fraternity in the public market without which enterprise would languish and confidence disappear. In the world of imagination none the less, indeed all the more, it is essential that those whose lives are devoted to the work of genius should constantly breathe the breath of artistic life—live in the atmosphere of art.

Possibly they may be right who are inclined to say there is a little affectation in the enthusiasm of those artists who cannot live out of Rome or out of Paris. There are men, as we know, who cannot live out of our own London, soot and fog notwithstanding, for the sake of considerations sufficiently academical and, we may say, artistic. But this affectation, such as it may be, we need not very much complain of after all; for the very reason which has to be assigned for it is direct evidence of the vital importance of the atmosphere of fancy which confers so much advantage upon artistic headquarters. The pervading artistic element which is the voluptuous joy of Rome, even they who have not been privileged to enjoy it can fully appreciate. The artistic character of universal Paris also no one can fail to acknowledge. And even in London, we may add, with all sincerity and not a little pride, the advancing vitality of a hundred branches of art now finds a home not at all to be disparaged. The atmosphere of art has forced its way into London, and is becoming clearer every day. We are bold enough to think—even setting patriotism aside—that in another generation or two it may be, for many if not all practical purposes, almost as clear as it is anywhere else in the world or ever has been.

In fact we are not quite sure that, even now, it is necessary for the calico-printers alluded to by Mr. RATHBONE to send their designers to Paris in preference to London; unless, indeed, there be in question the study on the spot of some special field of antique workmanship, in which case it is scarcely the universal artistic sentiment so much as a particular one that is relied upon. Many English experts have of late years been inclined to encourage the feeling that already the difference between French and English design is not a matter of degree, but of national style alone. In plain language, we have been led to believe that, in not a few departments of artistic manufacture, English taste has been proving itself equal to French in merit, although different in character; and so much so that our clever neighbours themselves have been warning their manufacturers of this same novel and alarming competition as threatening their foreign markets. The South Kensington establishment, much as it might, in the opinion of some, be improved in respect of efficiency, has certainly helped to accomplish thus much with *éclat*; and, seeing that the

museums, schools, studios, and shops of London may be said to bring together, not only all English work, but all foreign work that is worth having, in homage to the dominant wealth of English purchasers, this again is a consideration which must exert no little force in producing an atmosphere of art for those who here carry on the study or the business of design.

One interesting peculiarity of this local artistic air in our more modern times is the circumstance that it no longer circulates around the sacred person of this and that individual GAMALIEL. We have no DRYDENS and JOHNSONS even in literature now; we have not so much as a CARLYLE. A LEIGHTON or a MILLAIS prefers, if only a book must be written, that his enemy should write it. Officers of the Royal Engineers somehow sit in the chief seats at South Kensington; and so far, doubtless, in accordance with the spirit of the time, or they could not keep them. Sir HENRY COLE, whatever may be said of him, put a stop once for all to the personal leadership of academical authority, and set up the independence of general development instead. When we see our own architectural chiefs, a NORMAN SHAW, a PEARSON, a WATERHOUSE, professing that not one of them can undertake to read half a dozen lectures to the students of the Royal Academy, we may feel a momentary surprise, but we are not precluded from reflecting that, in the circumstances of the moment, this may nevertheless be for the best; for the platitudes of EDWARD BARRY and the paradoxes of STREET were a fit ending perhaps for the reign of professorial ascendancy, even in such art as the architectural.

Neither does it seem to be likely that the sovereignty of individuals is to be transferred to coteries in these days of ours. The atmosphere of art does not emanate from Burlington House or Conduit Street any more than from the pigeon-holes of South Kensington. Rival academies, under a variety of formidable names, have started up in all directions, and the division of artistic labour and the distribution of artistic influence are the order of the day. Out of London also, here and there, the vital air of art is beginning to circulate effectively. Millionaires in Liverpool, Manchester, and the northern towns buy the great pictures of the London market as a mere investment of surplus capital; but even so sordid a policy as this tends all the more to diffuse the atmosphere of art.

Perhaps the most pleasing reflections, however, to which Mr. RATHBONE's statement gives rise, may be such as turn upon the satisfaction that must be felt when we learn that such extremely prosaic art manufacturers as calico-printers are supposed to be are so much alive to the benefits of the artistic air. They have learnt experimentally, by the supreme test of the counting-house returns, that their designers cannot be expected, amidst the dull associations of a manufacturing town, so to thrive in respect of fancy as to produce good artistic devices; or, at any rate, they have learnt that these men, regarded in whatever mechanical light, thrive so much better in a more artistic atmosphere that they produce devices of a much greater value; and indeed the conclusion they have come to is that it pays them to send their designers to live in the most artistic atmosphere that can be had. Certainly this is highly satisfactory. English political economy at length, in the most businesslike way, "without any nonsense" and so on, is declaring for the actual market value of the most subtle imaginative influences, as a direct equivalent for pounds, shillings, and pence, dollars and cents, florins, roubles, hides and tallow, palm oil and ivory, and all sorts of substantial commodities, however widely these may open their eyes at first on finding themselves made of no more account than the shade of a colour or the turn of a line.

But do not let us forget another pleasing reflection. Mr. RATHBONE's firm of calico-printers, who seem to see their own interest so well, have not concluded to employ Parisian designers; they prefer English designers provided they go to live in Paris. If we understand Mr. RATHBONE aright, the men in question are all Englishmen; and we welcome this incident, not for the sake of patriotism so much as on account of the hopeful estimate we form, in the most cosmopolitan way, of the inherent intellectual value of the Anglo-Saxon fancy when advantageously developed. What we look for in its more characteristic manifestations is masculine vigour, a quality in art which in modern times has been far too little cultivated. Science has been of the boldest, removing mountains almost recklessly everywhere; art has been too often, even at its best, effeminate, dainty, feeble, timid, inanimate.



Speaking of the atmosphere of art in Paris, the question arises whether it is not somewhat of an enervating air after all. Perhaps it is; but time waits. Taking architecture as the typical art it is, we certainly do not find, for instance, that Englishmen, or Germans, or even Americans, who have been students in Paris, turn out in after years to be so much characterised by muscularity as by elegance; and we may no doubt fairly expect the rule to hold good in decorative art generally. But in England at all events the muscularity can be got at home, and perhaps a little too much of it sometimes; and the value of the elegance for the present we may safely consider to be all the greater. Without, therefore, going so far as to recommend the artistic atmosphere of Paris for English designers at large, we may repeat that the intelligent recognition of its beneficial nature in such a case as that which we have had before us cannot be regarded otherwise than as a most hopeful sign, amongst others, of the reality of the rapid progress which England is well known to be making in the practical utilisation of the artistic element of life.

### HANS MAKART.

VIENNA, the gayest capital in Europe, has gone into picturesque mourning and genuine lament for HANS MAKART, the painter, the son after her own heart, whom a friendly critic has described as the impersonation of her especial light-hearted Sybarism. This gifted artist has died suddenly, between forty-four and forty-five years of age, in the full swing of his power and popularity. His career has been short, but rarely brilliant. He was born in 1840, at Salzburg, where his father was keeper of the apartments in the imperial Lustschloss called Mirabell, a residence beautifully situated amid gardens, and set forth within in the splendour of eighteenth-century taste. MAKART the father, and an uncle, pastor in the Tyrol, had some artistic gift and more enthusiasm as landscape painters; an uncle on the mother's side, who held a post in the castle, was an adept at a certain class of decorative painting, such as emblazoning of heraldic devices, and so forth. Little HANS thus grew up amid a splendid *entourage* and influences benign for the artistic temperament, as also for less desirable inheritance duly received—extravagance and restlessness. The father, giving way to these foibles, lost his post, enlisted in RADETSKY'S Italian regiment in 1848, and left the mother to shift for herself and child. She had some situation in the castle and did her best, apparently, which was not much, for the boy was left to run wild. He learnt nothing at school, was a taciturn but impish creature, delighting only in dreamy idleness, gazing at curious and beautiful things, and trying to draw. As he would not do anything else, the drawing was encouraged, and his maternal uncle, BÜSSEMEYER, taught the lad and gave him occupation. At sixteen they sent him to Vienna to the Academy, where not all his aptitude and the unmistakable cleverness of his drawings made other than unfavourable impression on the pedantic and rule-beridden officials, who turned the boy away to find his road home again in much poverty. But better times broke with a visit from Herr SCHIFFMANN, a landscape painter from Munich, who had married into the family, and came over to Salzburg to see his wife's relations. This painter was more discriminating, and read rightly the presage of genius in HANS MAKART'S imaginative inventions and intuitive colour; he taught the lad oils, obtained a small allowance for him from Archbishop TARNOTZKI, and in 1859 took him off to Munich to seek entrance into the school of CARL PILOTY, the historical painter. Unfortunately there was no vacancy, and for two years more HANS depended on chance training. However, he worked hard and with enjoyment, copied in the Pinakothek, painted every object worth painting in the good SCHIFFMANN'S house and *atelier*, painted the portraits of his host and hostess, and after two years was ripe for the especial advantages of the *Pilotyschule*, to which he was admitted in 1861, among the pupils of multifarious nationalities, varied styles and tastes, whose individuality PILOTY sought to develop while training them in the principles and technique of art.

MAKART'S peculiar capacities, which did not alter but merely strengthened as his powers of expression increased, soon showed themselves; he looked at nature then as he never ceased to look, through the intermediary of his fervid imagination; he drank in sensuous beauty with perpetual

thirst; his brain ran riot among themes which set forth the pride of life; earth satisfied him, not as symbol of something higher, but in its own round of imagery, transformed into a sensuous ideality by the alchemy of his artistic mind. He had supremely what the Germans call a talent for *das Malerische*—the paintable. Such a man is a born colourist, and that MAKART was a splendid colourist not even his enemies deny, although they may accuse him of strange mixtures or audacious and artificial splendour.

The first public essay of the young painter was on occasion of a commission for decoration of a dining-hall in St. Petersburg, which fell to the Piloty School. One panel was carried out by LIETZENMAYER and WAGNER, the other by MAKART. They were exhibited at the Academy, and MAKART'S composition, a scene in Venetian patrician manners and costumes, drew from a distinguished critic the comment, "*This man is a born painter.*" In 1863 MAKART went with LENBACH to London, where the works of our English REYNOLDS made a great impression on him. He painted a number of small pictures, from the "*Merry Wives of Windsor*" and fancy subjects; landscapes, too, one of which—*Roman Ruins*, the result of a visit to Italy—was badly hung at Paris in 1867, which so vexed him that he over-painted and spoilt it. Then came *Moderne Amoretten*, a study of children and young girls, some naked, some clothed; mongrel creatures, fascinating yet repellent, drawn with immense freedom; the background and details of flower and foliage put in with luxuriance and dash; the colour luscious and luminous; the technique founded on RUBENS. Munich wondered, and on the whole applauded. The picture went to Vienna, and there drew attacks absolutely brutal from the press, with the honourable exception of Professor PECHT'S criticisms in the *Neue Freie Presse*, and stirred the Academic body to crushing disapproval. Next followed the *Plague in Florence*, a canvas twenty-four feet by three, painted as a frieze; a scene of Mediæval orgy, in which nude and costumed figures are combined with ostentatious luxury in themes of dramatic violence and voluptuousness. The original design was to illustrate the "seven deadly sins." Again the painter's audacity and artistic power took the Munich world by storm. The figures in high light, painted over impasto of white and glazed with asphaltum, the shadows forced up in mellow depth, melting flesh tones, charm of line and colour, sent painters into experimental imitation, outsiders into a wrangle of words.

The picture had a tragic story; it was bought by a Jewish banker at Florence, whose tastes were in accord with the subject, even to his own mortal hurt, and after his death divers chances took the *Plague at Florence* to Berlin.

HANS MAKART meanwhile married his love in Munich, a simple girl of the people, whose beautiful blonde head received distinction in many of his pictures, notably in the *Catherine Cornaro, Queen of Cyprus*. He went to Rome, whence he sent the *Sleeping Juliet* now in the Belvedere, and then settled in Vienna, where his heretofore persecutors had changed their cry, and honours and wealth awaited him. The Emperor gave him a studio, and he painted assiduously, albeit soon giving rein to the spirit of pleasure-loving luxury which besets and too often befools the Viennese. Two decorative pictures known as *L'Abundantia*, the frieze for the Dumbas Palace, an allegory of Industries, the four groups of *Dawn, Midday, Evening, Night*, and, lastly, the famous *Catherine Cornaro*, chiefly mark the years up to 1873, when the last picture was shown at the International Exhibition. Later on we had it in London, at the French Gallery in Pall Mall, and the Veronese-like state and circumstance of the composition, the loveliness of the female types, the luxuriance and freedom with which figures and draperies were treated, must be fresh in everyone's mind. The luminosity of the painting and the splendid coloration, introducing tints of Oriental splendour, the beauty and *bravura* of the whole thing, dazzled the eye, and inclined one to look leniently upon the indications of a certain theatric ostentation and cheap effect which of late have increased upon the artist. Shortly after the completion of this picture, which with some is still held his master-work, MAKART lost his wife, went to Rome, came back to Vienna, and plunged headlong into the wildest expenditure, painting and spending right and left. The *beau monde* and the *demi monde* favoured him alike; he could paint as many portraits as he would. He organised *tableaux vivants* and *spectacles*, and entertained like a Mediæval noble. He painted a drop-curtain for the Vienna Theatre from SHAKESPEARE'S



"Midsummer Night's Dream;" he painted a sumptuous *Cleopatra*, and began the famous *Entry of Charles V.* He went to the East with Professor MÜLLER, and lived with him in an old palace at Cairo; roamed about and saw strange things, and filled his fancy full; painted also studies of Nubians and Fellaheen, and so forth. Finally dashed in his famous *Niljagd*—a quite amazing performance, depicting a chase of river creatures in CLEOPATRA'S days—crocodiles and sharks and birds, while the great galleys swing in the hot sun, and superb ladies look upon the wild scene, while others cast the spear. The impetuosity of the painter's genius has full swing in this artistic feat.

In 1875 the huge historic canvas, the *Entry of Charles V. into Antwerp* was shown, but unfavourably, in a small room at the great exhibition in Paris, where it did not raise as much enthusiasm as previously in Vienna. This stupendous undertaking among modern performances had taken the painter to Spain and to Antwerp for studies of historic costume and locality. It dealt with an immense number of figures and a crowded, even tumultuous, *mêlée* of horsemen and footmen, soldiers, pages, ladies, naked girls, children. The female figures were lovely, the management of the abundant material on the whole masterly. Isolated figures are splendidly drawn, isolated heads perfectly rendered; draperies, objects, fantastic *coiffures*, armour, brocade, all forced up with inventiveness and free-handed power. Yet, on the whole, the highest judgment pronounced that this animated *tour de force* might be fairly thus entitled, but hardly attained the dignity or solidity of historic art. The picture won for the painter the honour of Professorship in the Vienna Academy, but it was not bought by the State. Indeed, it is only lately that the painter received any commission to decorate a public building in the city which held him in such honour, namely, life-size decorative figures of famous artists in the new art museum.

Since the painting of *Charles V.* the style of MAKART has become more and more decorative, and he has of late too often permitted his art to degenerate into meretricious show and mere costume-painting, although at times pulling up and showing that his power was really as great as ever on the old lines. *A Bath of Diana* is a recent picture of nude beauty. Various portraits of charm or splendour showed his fidelity to the school of RUBENS. When he did not let his technique fall into careless and cheap effect, only too easy to his sleight-of-hand and spontaneous ease, no one could surpass him for certain masterly brushwork and breadth. He was ever the painter and the colourist. An ill-judged marriage, a life of excitement and luxury, have told upon a frame always at high-strung tension. Only the other day an accidental fire worked ravages in his costly studio; many things had worn down his nervous system. When disease attacked him he had no strength to resist, and the fitful flame of life and genius flashed out at once.

His career as an artist and a man leaves lessons behind it of stern import. The creed of sensuous beauty-worship has seldom had a more ardent or more gifted exponent; but this art of HANS MAKART, splendid apparition as it is, must pass with him, for in it were the seeds of corruption.

## MODERN BIRMINGHAM.

[BY A CORRESPONDENT.]

THE occasion of the recent Congress of the Social Science Association at Birmingham seems to afford an appropriate opportunity for saying somewhat as to the manifest improvements that have taken place in the architecture of that town since the first meeting of that Society was held there. The lamented decease of the well-known architect, Mr. J. H. CHAMBERLAIN, who contributed much to the embellishment of Birmingham, and whom his fellow townsmen delighted to honour and employ, leads us also to some consideration of the character of his special work in connection therewith.

Birmingham is a large and important, but not on the whole a very impressive, town, and generally resembles some second-rate district of London, with a stronger sprinkling of mill chimneys. It is, however, set amidst pleasant rural suburbs, which, as in the direction of Edgbaston, for instance, have been well laid out, and these, now that plantations have come to maturity, have an appearance of much beauty and refinement. Then, in the centre of the somewhat commonplace congrega-

tion of brick buildings which constitute the town proper, a goodly number of municipal and other buildings of considerable importance and varied excellence have, as an after-thought, become grouped together, but to these there has apparently been neither time nor means to provide proper approaches. The members of the Congress, at whose disposal many of these structures were liberally placed for the conduct of their business, and who were hospitably lodged and entertained in the suburbs, reached through comparatively insignificant streets, may, therefore, be excused from asking, as we know some of them did ask, "Where is the town?"

In New Street, it is true, are some good shops, and Corporation Street, when completed, will doubtless produce a better impression hereafter, but Birmingham needs some radical measures in the way of improvements, such as are already in contemplation, and which the energy of its townsmen are sure before long to carry into effect. For the present, however, we are almost forced to confine our remarks to the specimens of architecture which are somewhat happily concentrated in its centre, and which now alone arrest the attention of strangers.

These, many of which are stately in themselves and picturesque in their combination, form a curiously motley group that is eclectic enough with a vengeance. It might indeed well be asked with regard to this, not as with the rest of the town, where it is, but rather what is it? Pagan or Christian? commercial or æsthetic? practical or otherwise? Its principal structures are ranged around a veritable Corinthian temple, which does duty for a Town Hall. This, for want of elevation on such a rocky acropolis as it might be supposed to be accustomed to, has a fairly rusticated basement to lift it above the level of the streets, so that entrance into it is gained by some far from dignified openings below, leaving the porticoes above for ornament rather than use.

This early and isolated attempt in the antique monumental order seems to form a fitting commencement of the Battle of the Styles which eclectic Birmingham has since, and is still, waging around it. The partisans of Classic and Gothic seem about in equal force, with victory, fickle as fortune, inclining first towards the one party and then towards the other, indecisively.

Nor is the resulting inconsistency here confined, as elsewhere, to merely placing side by side alternately, or *vis-à-vis*, works borrowed from Italian or Teutonic precedents, but these contrary types are sometimes jumbled up quite inextricably even in the same buildings, and in the productions of the same architects. Such minor *mésalliances* as the addition of Renaissance features to buildings of the Italian of Rome, or of mongrel Victorian with Florentine, of Tudor and thirteenth-century Gothic, are too common even to strike as eccentricities. Nor are the most startling combinations of colour and material infrequent; sober stone façades are, for instance, fretted in parts only with the glitter of mosaic, so that all possible transitions from the grave to the gay are indulged in on the same buildings. Symmetrical structures are placed in side streets where no possible point of view of the complete façades can be obtained, and the utmost defiance of symmetry is paraded on sites where decorative open spaces before them seem to demand it. Had PUCK, in fact, been commissioned to set all the Town Council of Birmingham and their architects by the ears, he could not really have improved upon the confusion worse confounded that he would find already provided to his hand.

The late very clever and greatly esteemed Mr. J. H. CHAMBERLAIN must in particular have been an architect gifted with the utmost complaisance towards his employers, with no definite will of his own and ready to bow to the whims of one mayor after another, or else he was himself a man of many minds, and strong-minded enough to bend others to them. He appears, at any rate in his works, a sort of architectural wizard, for at the beck of others or caprice of his own he began buildings in one style to finish them in another, or more often in what were better described as no style.

The original building of the Birmingham Free Libraries—a sober and respectable structure of Italian architecture of the well-known Roman type—is now approached by a portico, handsome enough in itself, but of a florid Renaissance character. It contains on the ground floor a spacious news-room with iron columns, with brackets supporting girders from which spring brick arches, producing an interior for which a railway engineer rather than an architect might be credited; but on



the floor above, the corresponding supports in the reference library have blossomed out into polished granite piers of somewhat ungainly proportions, carrying semicircular stone arches and an elaborate ceiling, decorated in very inharmonious colouring, the prominent tints of which are blue, green, pink, and white. The staircase vestibule has its walls of red brick with a dado of tiles, with geometrical designs in pale blue and white forming a harsh contrast, not improved by the kaleidoscopic coloured glazing of the windows. An Elizabethan apartment has been added to contain a special SHAKESPEARE library, completing perhaps an historical, but not a consistent, architectural series of apartments within.

As regards, therefore, this building, we are forced to confess, in the words of the published report on it for the years 1881 and 1882, "that, as regards the decoration, the most unobservant visitor cannot fail to be struck with its almost infinite variety of design." We wish we could add with its harmony as well, but we cannot; nor can we agree that "the same manifestation of skill in the use of colour, apparent in the interior decoration, is visible also in the exterior design of the Edmund Street front," for, though some of the designs and their treatment are very good, they are inharmonious in their combination and character. In fact, Mr. CHAMBERLAIN has, in our opinion, much to answer for in perverting the taste of the inhabitants of Birmingham in this respect of colour. To complete the incongruous character of the pile, a florid Gothic façade occupies the end opposite that of Edmund Street, and the great hall of the Midland Institute, to which this gives access, and in which the inaugural meeting of the Congress was held, is a spacious and in many respects a fine apartment, not, however, remarkable for its acoustic qualities, and decorated in a restless manner and with colouring which is not at all harmonious.

*De mortuis nil nisi bonum* is an excellent motto, which we fear we must be thought to have transgressed in the foregoing remarks. From all we have heard of Mr. CHAMBERLAIN, nothing but good could be spoken of the man; but his works live after him, and so far as they may influence the taste of the inhabitants, we feel bound to speak out our judgment of them. He seems to have followed rather than led public opinion, inclining more to Gothic than Classic when permitted to do so, but in a somewhat florid and fanciful manner, without great purity of detail or dignified treatment of the art, so many opportunities in which were afforded him. The School of Art, left unfinished at his death, and now in process of completion from his designs, seems to possess considerable promise, and we trust it may prove a favourable specimen of his talents, which were undoubtedly considerable, and so redound to his posthumous fame. It is wholly in the Gothic style; it has a symmetrical façade, though facing a narrow street, and a mixture of details of diverse periods of Mediæval architecture are becomingly conspicuous. The Gothic fountain in front of the Town Hall is a favourable example of his work; but the canopy over the statue to Mr. DAWSON is less so, being far too florid and fanciful for its purpose; and one looks with relief from this to the quiet treatment of the statue of WATT on a simple pedestal. Mr. CHAMBERLAIN'S other works in the town and its neighbourhood have been very numerous, and include a large number of Board schools and several churches, none of which latter, however, have been of an important nature. Altogether his career was one of a highly-creditable character, and he has left behind him a good local reputation, which he fairly earned.

We have not space to mention many other works, and shall only refer to the very stately, and, on the whole, satisfactory, pile of building, on a fine site, formed by the Council House, the work of Mr. YEOVILLE THOMASON, in order to express our regret that the Art Gallery adjoining it, by the same architect, is not in character therewith. This incongruity adds to the *bizarre* appearance of the locality, and an angle tower facing the square of the Town Hall, which might have been treated so as to produce a noble effect and bring the rest together, quite fails to do so.

One cannot dismiss this locality from our notice without comment on the Mason Science College in Edmund Street, which was lent to and formed the principal scene of the labours of the Social Science Congress. This is really a very excellent building in early thirteenth-century Gothic, most creditable to its architect, Mr. J. A. COSSINS, both externally and internally; and Mr. HOPE, the President of the Congress, might fairly have referred to it to refute the popular error that

this style does not permit of practical as well as of æsthetic excellence, for the building is thoroughly well suited for its purpose. We must own, however, that really beautiful as is the symmetrical and well-studied elevation, it does not seem to have been designed for the site it has to occupy, half facing the area before the Town Hall and half down Edmund Street, a position which called for quite other and more picturesque treatment. It is saying a good deal when we aver that it would be worth while to take a lesson from our American cousins, and shift it bodily *vis-à-vis* with the Town Hall. Mr. COSSINS is now building a Gothic club in close vicinity to this other structure of his, which also promises to be an ornament to Birmingham.

## STUDIES OF LONDON CHURCHES.

[BY A CORRESPONDENT.]

(Concluded from page 214.)

THE church of the *Holy Trinity*, Knightsbridge, is notable as built where one of the oldest churches in London stood (as the vicar informed the writer). On its site was formerly a leper-house in connection with Westminster Abbey. It is worth mentioning, too, that the Abbey was supplied by a conduit just beyond Holy Trinity, at the east end of the Serpentine, till A.D. 1868, as recorded on a tablet to the memorial pedestal there. The church, removed in 1860, had been erected by license from Archbishop Laud in the first year of his episcopate, in room of one then "so ancient and decayed as to be ready to fall." (Mackeson's "Guide to the Churches of London.") The great difficulty which the skilful architect, the late Raphael Brandon, had to contend with was the very cramped size of the plot of ground with which he had to deal. Moreover, it was impossible to follow the usual and pleasing practice of the English Mediæval church, happily surviving to our own days—I mean that of orientation—as houses closely abut the east and west sides, not giving sufficient length for that purpose. The only entrance and the only façade to be seen is the south end of the nave. It is true that the north elevation is visible from the drive in Hyde Park, if looked for, but is not conspicuous. There is consequently no true chancel—only a makeshift arrangement for the same. There are scarcely any windows towards the east and west, and their absence is regrettable, but of course could not have been avoided. There are only two windows on the east side. To make up the deficient accommodation on the ground floor, the church has been galleried up to such an extent as to ruin its effect. No pretence at ornament has been made in the design of the galleries, which are miserably poor, architecturally speaking, and much block up the interior. At the south end are, in effect, two galleries one above the other. The upper one contains the organ, placed in one angle, and not in the centre. The roof of the church is of open-timbered hammer-beam construction, with a quasi-clerestory, very effective internally. But unfortunately the building is so short and so narrow that the student has to crane his neck to see the "clerestory." Externally, the look of this range of windows is very unsightly; but, as has been mentioned, they are not at all prominent.

The church of *All Souls, Harlesden*, the design of Mr. Tarver, is a building specially devised with the object of having no piers or other obstruction to view, so as to be thoroughly congregational, of ample width, and with all the seats facing east. It should be added that the present structure is but an instalment of what is to come. Only a small portion of the chancel has been erected, and the western end of the nave is not yet finished. However, one of the most characteristic features of the church is now existent in the shape of a large octagon, probably suggested by the circular churches of the Templars—St. Gereon, Cologne, or Aix la Chapelle Cathedral. But except in this feature of the plan there is no resemblance whatever to the churches named. There is a gable to each external side of this octagon, and under every valley is a tie-beam. All these tie-beams necessarily unite in the centre. The thrust at each angle is well carried down to the floor-line by arched braces. So, notwithstanding the considerable diameter of the octagon, it is in construction very strong, as the thrust is equal all round, well distributed, and not on any one part. The use of these ties well binds the building together. In the examples previously named, at Aix la Chapelle and St. Gereon, Cologne, the octagon has been surmounted by domes, by far the most elegant mode of roofing, and affording abundant height. Light would be admitted through the drum of the dome, but domes are costly, and in this instance the church was bound to be a cheap one. It has, therefore, been necessary to make the height of the building moderate. An open roof has been constructed, the effect of which is very picturesque, though not majestic, with its multitude of timbers. But it is the architect's intention to eventually make it a wood panelled ceiling. All the benches are free and unappropriated, and opposite each "kneeling" is a little mat hung on a knob, with a label stating that the offertory is collected in such a way that no



one but God knows how much each worshipper gives. There is also the text of two short prayers to be used on entering and leaving the church. Every one is likewise enjoined to study his neighbour's comfort in worshipping. All this is very right and proper. Would that this kind of personal appeal were more often made in churches from those who have been called to minister there! Concerning the exterior it cannot be called very ornamental or church-like. The attempt to give a more decorative appearance by the pyramidal cappings to the buttresses is not quite successful, and it would have been better to omit them altogether. There is not a band of red brick and scarcely any stone externally to relieve the monotony of the stock bricks. The windows have not a two-ordered reveal externally, but a single one, which necessarily gives them a very plain appearance. The moral to be deduced from an examination of this building is that it is, after all, better to keep to the rectangular plan, and so avoid difficulties and expenses in roofing, as well as the awkwardness of treating the design well externally, unless considerable expenditure is incurred. The attempts of conscientious architects to depart from the cut-and-dried form of plan are much to be commended; but care must be taken not to land the originator into fresh dilemmas thereby. There is much to be commended in this thoughtfully-designed structure.

The Wilberforce memorial church of *St. Mark*, Coburg Road, Old Kent Road, the design of Mr. Norman Shaw, R.A., is a very plain building externally. The west front is so for very sufficient reasons, as it is temporary, only two bays of the nave and aisles having been built at present.\* This front is covered with slates, and is about as ugly as can be imagined; but it is now in contemplation to proceed with the extension of the church, when one may hope to see the design of the architect consummated. In plan it at present consists of a nave with side aisles, north chancel aisle, chancel, and preparation for a future south chancel aisle. The nave and aisles are vaulted in wood, painted white. The aisles have tie-beams to each bay. The piers, with moulded capitals, are of red brick, like the rest of the interior, and rest on a lofty pedestal or dado of cement, the same feature being continued, like wainscoting, with mouldings of a Classic type all round the nave walls internally. The dark old wainscoting in Wren's churches is charming-looking, warm, comfortable, and handsome. But oak is too dear now to use in this manner as a general rule; the crude white dado will in all probability be painted when the church is finished. The treatment of the lower part of the piers, casing them in cement, is certainly better than doing the same with wood. The type of window to the nave aisles is that of the very crude transition from Early English to Decorated before tracery was arrived at, where the mullions run up into the head uncusped, with nothing above them. There is no possible beauty in these tentative features of an embryo style. In the east window it is fortunate that some tracery has been designed, only the central light being carried up into the head. The chancel arch has no respond pier to speak of, and is not made a particular feature; it is the rood screen which serves as the distinctive adjunct to divide the nave from the chancel. This screen is a singular mixture of Perpendicular and "Queen Anne" work, with forms adopted from a very debased period in the heads of the three lower panels. The portion of the screen up to about the height of two feet is of stone; but as all the woodwork is painted white it is not easy at a distance to discern what material has been used. The under part of the lower panels is left open in a very curious manner. The higher portion of the rood screen is much subdivided by tracery work, &c. A plain floriated Latin cross, decorated with carvings of roses at intervals, is placed in front of this tracery. "Cheek by jowl" with the tracery are twisted balusters in the Queen Anne style. The roof to the chancel is of trussed rafter construction, with framed collars and braces, having tie-rods at intervals in their naked unadorned simplicity. A telling feature in the interior of the church is the cusped arcading round the chancel walls at the level of the windows. All the arches are of chamfered or moulded brick. Externally the building is of grey stock bricks, without the relief of any other coloured materials or different kinds of bricks, no attempt having been made to render the church particularly attractive from the outside.

In the church of *St. Clement*, Lever Street, City Road, lately rebuilt, owing to the former church not being large enough, is a noble specimen of one of those majestic town churches so common on the Continent, but unusual in England till within the last few years. The type is, however, becoming much more prevalent: rising far above the surrounding houses, plain and simple in outline. The plan is simple to a fault—a rectangle, *i.e.*, nave and chancel of equal width, and the roof continuous. The chancel externally is scarcely distinguishable from the nave, the windows in both cases being of the same design. The writer is reminded in this plan of Keble College Chapel, Oxford, the design of the same gifted architect, with the difference that at *St. Clement's* there is a north aisle. In other respects there is little or no resemblance

between the two buildings, though both necessarily contain some of the well-known characteristic touches of Mr. Butterfield. At the west end is a gabled bell turret, corbelled out from the walls, containing two bells. There is a north aisle, but no room for a south, as the surrounding buildings abut too closely, the site being much hemmed in. The limit of the nave and chancel is marked externally by a projecting stair-turret with splayed sides for access to the lofty parapeted roof. This turret is crowned by a gable, the oblique sides being corbelled out with picturesque effect into a square plan. But for this feature the general outline would be very monotonous owing to the unbroken continuity of the walls and roofs. The church is entered through the north porch at the westernmost end of the building (though there is also a south door opposite to it), and the effect as one turns eastwards is very fine. The immense unbroken blank space of wall on the south side, owing to the windows being placed on the same level as the clerestory windows on the north, is of some value to the composition. Up to a considerable height this south wall is lined with plain red tiles, set square-wise, finished at top by a stone string course. Above, the wall is of stock bricks, pointed, as is the case with the remainder of the interior. The arcade of the nave opening out into the north aisle is of a bold, severe type. The piers are cylindrical, of Bath stone, on simple bases consisting of two chamfered plinths, one above the other, and with modest-looking moulded capitals. These carry stone arches, which at the abacus level are equal-sided octagons in plan, the chamfer being, therefore, a large one. The effect is good, though a hypercritic might argue that an arcade carrying a lofty clerestory, and with the weight of a roof of large span superimposed, ought to suggest greater strength, and not have so considerable a proportion cut away. The clerestory, which is also of simple design, consists of two two-light windows to each bay. It is in the knowledge of when to be modest and unassuming that one of the secrets of good architectural effect is found. Much also of the successful effect in this church arises, not from ornamentation, but from the great scale of the building. The nave roof is of a kind of which Mr. Butterfield is fond. There are trusses having their tie and king rods, and intermediate trusses, the general construction consisting of trussed braces to every pair of rafters, ceiled in lath and plaster at the back. The aisle roof is of a very plain description. A pier very slightly projecting, with angle-nook shafts, marks the division between nave and chancel. This carries a double truss, or rather two trusses side by side, over which is a floriated cross, the whole being painted. This forms one of the most original features of the church. There is a five-light traceried east window, and the sanctuary is handsomely arcaded. The reredos is lofty, containing a representation of the Nativity, over which is a gabled canopy. The latter, however, is so high that it conceals a good portion of the central light of the east window. Though the latter is glazed with grisaille, it seems curious to have put it into a new church and then partially hidden the same by placing stonework permanently in front. The organ-chamber is on the north side of the chancel, separated from it by a large arch subdivided into two. On the west side of the organ, opening out into the north nave aisle, are two very plain arches, a rather unusual feature.

The church of *St. Edmund the King and Martyr*, Lombard Street, not long since was furnished with a new organ, built in a chamber on the north side of the structure, near the chancel end. Nothing, however, can be seen of the chamber, as the pipes completely fill the opening into it. The large wooden pedal pipes are brought out into one of the arched recesses south of the regular front (the church stands with axis north and south). The growing passion for organs unnecessarily large and powerful for the church in which they are placed is to be deprecated for several reasons, architectural and otherwise. If the full force and power of the organ is brought out, the lover of music is almost deafened, and the stowing away of the pedal pipes, bellows, &c., becomes a serious difficulty, so as not to disfigure the structure and make it look like an organ-builder's factory. Salisbury Cathedral affords a notable instance. The spirit of emulation among different organists and congregations is at the bottom of this. Each congregation likes to think it has a finer organ than its neighbour. It is well, however, to bear in mind that the primary use of a church is for worship, and that elaborate instrumental music is no absolute necessity, however admirable and to be recommended for many reasons. This church of *St. Edmund* is a small one, and certainly does not require a very powerful organ. The decoration of the interior of the church is clearly from the pencil of Mr. Butterfield, in his well-known style. The semi-circular arched recesses in the walls are coloured a dark chocolate (with the exception of the tympana), the piers a kind of yellowish stone colour, the masonry pattern having been adopted. The scale of this appears rather too large for the size of the church. The cove of the ceiling is painted a bluish grey. The general scheme of decoration to the body of the church does not supply any specimens of figure subjects, but only geometrical work. But at the chancel end are representations of the *Agnus Dei*, and of the Holy Dove. On the ceiling of the chancel, over the altar, is depicted our Saviour in glory.

\* The church has been completed since this was written, but it has been thought better to leave the description unaltered.



The church of *St. Augustine's*, Queen's Gate, has been commented on previously in these columns. It is a building displaying a good deal of skill, thought, and care that has been bestowed on its design. But, like all the works of Mr. Butterfield, there are queer (no other epithet so well expresses the meaning intended to be conveyed) pieces of detail in it. For example, the manner in which the shafts carrying the principal trusses of the nave roof are crudely and abruptly cut off, immediately above the very large recessed quatrefoil panels in the great arcade, has not a good appearance. These quatrefoils, by the way, are on so large a scale that they rather demand sculpture to be added to them some day, and thus serve as medallions for scriptural subjects, as has been happily effected in the parish church, Frome, and at St. Mary Magdalene, Paddington. At present the panels certainly have rather a blank appearance. Had they been smaller and the shafts corbelled back a little higher up, with more of an attempt to avoid crudity, the effect would have been better. As regards the beautiful pulpit, the sculptural treatment of the crucified One, occupying the most important panel, which is in the form of a vesica with the attendant little angel above the Saviour, is very appropriate. In the five-light east window, in the centre our Lord is represented nailed to a Latin cross, which is plain in outline, but enriched by a kind of quatrefoil diapering. It is enclosed by a vesica-shaped aureole, with all the effulgent rays issuing from it. The remaining four lights flanking this central subject are filled with the figures of St. Augustine, St. John, the Blessed Virgin, and St. Mary Magdalene. This is a very suitable way of treating the subject. In the same window two necessarily odd-shaped forms of the tracery are occupied by representations of the sun and moon the former with a man's face, a not uncommon conventionality, but one which to the writer appears grotesque and out of place in a church. There can be no difficulty in representing the sun almost as he appears in nature, with all the rays issuing from him, or these might be treated conventionally. In some subjects this could not be done.

The writer must now close his remarks, at any rate for the present. The study of London churches, it is hoped, has been shown to be an interesting one. In the vast area of this metropolis of some four million souls, a number equal to whole nations in other countries, it is clear that there must be great diversity of design in the churches, especially when some of those which we have commented on were built nearly two hundred years ago, after the great fire. One of the great privileges and pleasures peculiar to an architect consists in his independence of the caprices of weather. When it rains, even for a whole day or days, he can turn into some grand old church, or a good modern one if an ancient is not accessible, and turn his enforced sojourn indoors into a profitable occupation. In London he has an abundant choice; for, though the City is not rich with many Mediæval churches, yet Westminster Abbey, St. Saviour's, Southwark, and St. Bartholomew's, Smithfield, alone offer an attractive field of study.

### THE PROPOSED DUBLIN MUSEUM.

DURING the meeting of the Library Association in Dublin Mr. Thomas N. Deane, R.H.A., exhibited and described the plans for the new building for the National Library. These were only preliminary plans, and therefore were subject to a variety of modifications. The scheme embodied a National Museum as well as a National Library. Its general scope was this:—The square in front of the Dublin Society's house would always be open. On the right-hand side, looking from Molesworth Street, would be the main art gallery, and at the left side, at the side where the Kildare Street Club was, and next to the College of Physicians, would be the National Library. The School of Art would be transposed to the other side, and placed in the Shelbourne Yard; and the Lecture Theatre, which now occupied a site in part of the Shelbourne Yard, would be also transposed, occupying part of the ground on which the Schools of Art were now built. The library was intended to hold 800,000 books. These were to be arranged in such a way that they could be easily accessible. The large reading-room was of semicircular shape, or something beyond that, and would accommodate 124 readers. At either side there were supplemental rooms for special readers, each 32 feet by 24, and elsewhere a room for lady readers. The arrangements of the books was an extremely important point. He had been much indebted to Mr. Archer, the Librarian of the Dublin Society, for information as to the storage and shelving of books. There were to be smaller rooms for special readers and store rooms for books, which would each contain thirty-four cases. The book cases he proposed to be of iron, and it was a subject for discussion as to what the shelves should be constructed of. He had been informed by a member of the committee of the Washington Library that it was proposed there to have glass shelves framed in iron; but the question was still unsettled.

Mr. William Archer said it was not decided yet whether the artificial lighting would be by gas or electricity. Their reading rooms would be even better lighted than those at the British

Museum. The entire accommodation for readers would be 210. If no other class of readers than those who came at present to Kildare Street was to be provided for that would be sufficient; but if, on the other hand, their lordships in London and the trustees in Dublin should think of making the library more popular, so as to cater for the artisan as well as for the cultured classes, portion of the store-rooms and other space on the ground floor to each side of the main entrance could be utilised for readers, and the books so displaced stored elsewhere.

Professor Valentine Ball believed that glass would be highly suitable for the purpose of shelves, as it could be easily cleaned and kept dry and would not harbour insects.

### THE SCOTTISH NATIONAL PORTRAIT GALLERY.

THE interesting and instructive exhibition of Scottish national portraits, which has been open since the beginning of July, in the Royal Scottish Academy National Galleries, is to be closed to-day (Saturday). As regards the arrangements for the National Portrait Gallery, it is satisfactory to know, says the *Scotsman*, that steps are being taken to have a commencement made without delay. It is hoped that, in the course of a few weeks, a temporary building may have been secured in which the collection may be placed pending the erection of a permanent gallery. The pictures already at the disposal of the Board of Manufactures will form the nucleus of the collection; and the owners of a number of the best portraits in the present exhibition have been applied to, and have readily assented to an extension of the term for which those paintings were lent. There is, we hear, the prospect of a permanent record being secured of both the present portrait exhibition and the loan exhibition of old masters, held last year. With the permission of the owners, photographs of the leading pictures in both collections have been obtained; and these, with due addition of descriptive matter, it is proposed to publish.

### THE FIRE AT CHRISTIANSBORG CASTLE.

ON the 3rd inst. a destructive fire broke out in the Danish Palace of Christiansborg. The building stood on the island of Slotsholm, surrounded with canals, which forms the oldest part of Copenhagen. From time immemorial there was a castle there, and about ninety years ago the building in which the fire took place was commenced. It was large in area, but without architectural character. The main front was about 130 yards in length, the side wings each of about 100; six storeys rose to a height of 40 yards to the cornice, and above was the elevated roof. The cost of the building was estimated at about 7,000,000 crowns, but it would be impossible to reconstruct the castle nowadays at less than triple that amount. A correspondent of the *Times* states that the apartments were decorated with great splendour, and contained many treasures of art and workmanship. Among these the most famous was, perhaps, the *basso-relievo* by Albert Thorwaldsen, representing Alexander's triumphal entry into Babylon; but most of the larger rooms contained pictures and sculptures of high worth, besides costly vases and china, Italian mosaics, and other costly furniture. In one of the wings, just under the banquet-hall, and separated from this only by an *entresol*, the two houses of the Rigsdag, the Folkething and the Landsting, were installed, each with a large hall for the public meetings and long suites of committee-rooms, stenographers' rooms, printing-offices, archives, &c. The opposite wing contained the Supreme Court, and in the uppermost storey the royal gallery of pictures. This collection can, it is true, stand no comparison with the great galleries of London, Paris, Vienna, or St. Petersburg, but, with all that, it includes a large number of paintings by renowned artists, among them several real masterpieces, and in a separate division a representative museum of the Danish school of art from its first beginning until this day. It will be seen that Christiansborg proper included within its walls enough to make the huge pile extremely valuable. But this was not all. In immediate connection with the western wing was built a church, and just behind that, parallel to some outbuildings of the palace, riding-school and stables, is situated the Thorwaldsen Museum, that unique collection of all the works due to the pure and lofty genius of that marvellous sculptor who rests here himself in the midst of the marble gods his fancy brought into life: *si monumentum quaris, circumspice!* The destruction of Thorwaldsen Museum would have been more than a national loss—it would have been a universal calamity. On the opposite side of the palace a long and low outer wing contained the Royal Privy Archives, the collection of historic documents and State papers from the oldest time unto our days—an invaluable depository of information as to the history not only of Denmark, but also of Sweden and Norway. Close to this again followed the great Royal Library with its six or seven hundred thousand volumes of books, many of them exceedingly rare and costly, besides an incomparable collection of old manuscripts, venerable codes, and



literary treasures. Very near to the castle, indeed connected with it by a low building, extend the Public Departments, the Chancery Building, as the complex of houses is called, a perfect maze of crowded rooms, winding corridors with bewildering nets of chimney-pipes, and closets filled with loads of musty paper. The Treasury Department, or Ministry of Finance, has its vaults nearest to the palace, and in them are kept many millions of ready money, besides the public funds of Consols and other valuables. Only the breadth of a street separates the Departments from the Exchange, a highly characteristic structure in Elizabethan style, with a curious steeple formed by the spirally-twisted tails of four dolphins. Behind the Privy Archives and the Royal Library is the Arsenal, in which are kept all the rifles, swords, and military accoutrements of the entire Danish army. It will be seen, in this way, that the island of Slotsholm, though forming a separate quarter of the town and of easy access from all sides, keeps within its narrow limits a very valuable part of the capital's attractions and of the treasures of the nation. A fire in any part of this conglomeration of buildings could not but be extremely dangerous to the whole. From no starting point could the risk be greater than from the castle, because its lofty walls and inclined roofs rise so high that none of the engines could reach up to them; so that a fire when first fairly started could not expect to be controlled, and then only a miracle could save the smaller contiguous buildings from catching fire and going to destruction. This miracle happened at the tremendous conflagration on the 3rd inst. The palace was entirely destroyed by the fire, but, owing to the almost absolute calm and a concourse of favourable circumstances, not only Thorwaldsen's Museum, the Privy Archive, the Royal Library, and the Arsenal were saved, but, in the few precious moments left before the flames spread to the wing of the picture gallery; most of the paintings and nearly all those of real value were carried off to a place of safety. The same was the case with the very large treasure of silver service belonging to the Court, and hoarded up for many generations by splendour-loving kings. Not only most of the paintings were saved, some in their frames and others without them, but many sculptural works—even groups heavy enough to tax the strength of several scores of arms. The archives of the Rigsdag and of the Supreme Court were thrown out of the windows in the mud, hurried up from there on wagons, and carted away like rubbish in the utmost haste. Owing to the direction taken by the conflagration and the feeble wind, there seemed to be no imminent danger to the Royal Library and the Privy Archive; but quite differently situated was Thorwaldsen's Museum. Happily, this construction is only of a moderate height. Firemen and sailors climbed up on the roof and spread thick carpets and tarpaulins kept wet by the engines; but as this was not thought to be protection enough, it was resolved to explode by dynamite a small pavilion connecting the palace with the church. At eleven o'clock the order was given, and a tremendous shock was heard all over the town. The gap thus produced seemed to stop the flames.

#### MEANS OF EGRESS FROM PUBLIC BUILDINGS.

AT the last meeting of the Dean of Guild Court in Glasgow, a statement was read which had been prepared by Mr. Whyte, the Assistant Master of Works, and in which was shown the egress capacity in proportion to its accommodation of every church, theatre, and other public building in Glasgow. Mr. Whyte says that no building should contain more persons than seventy to each foot of width of exit. It will be seen from the following that the proportion is exceeded in Glasgow:—

Scotia Music Hall, Stockwell Street—This hall will accommodate about 2,954 persons; the egress capacity is about 17 feet in breadth, equal to 173 persons per foot. The access to that portion of the gallery which is partitioned off on each side of the stage is very defective, being a narrow wooden stair. Bridgegate Established Church, East Clyde Street—This church is seated for about 800 persons; the only egress is by a door about 5 feet 3 inches wide. The two passages in the area of the church are only 2 feet 7 inches wide each. The number of persons to each foot in breadth of exit is 152. Standard Halls, 29 Main Street, South Side—This hall is very objectionably placed, being on the second floor of the building, and far from the street. This adds to the defect in the means of exit, which is about 4 feet 6 inches broad. The hall accommodates about 600 persons, or equal to about 133 persons per foot in breadth of exit. National Halls, 127 Main Street, South Side—This large hall will accommodate about 2,600 persons. The exit is towards Main Street, and is about 9 feet wide, equal to 288 persons per foot. Although this number to the foot of egress is much greater than the Standard Halls, the National Halls will compare favourably with them, the area of the hall being on the level of the street, and therefore no stairs other than those leading to the gallery. Wellington Palace Hall, Commercial Road—The large hall here will accommodate about 3,600 persons, and the egress is 21 feet 4 inches, equal to about 168 persons per foot of egress. This

egress can be improved by widening the doors, which could easily be done. Music Hall, 36 Landressy Street—This hall will accommodate about 1,500 persons. The egress is not satisfactory, being only 8 feet 8 inches wide, about 173 persons per foot. Globe Theatre, Tobago Street—This building, at present under alteration, will, when completed, accommodate about 1,033 persons. The egress is about 10 feet, equal to 103 persons per foot. A door 3 feet 3 inches wide on stair leading to dwelling-houses can be made use of, but it has not been taken into consideration. There ought to be another exit stair constructed from the gallery. Britannia Music Hall, Trongate—This hall will accommodate about 1,865 persons. The egress is about 10 feet 9 inches—173 persons per foot. Although the egress is considerably improved from what it was, it is not yet satisfactory, and on account of the hall being on the first floor of the building, and access being obtained by a stair from the street, it is more objectionable than if it had been on the street level. In future, it might be well if halls of this kind were not authorised, except upon the street level. Albion Hall, College Street—This hall will accommodate about 1,500 persons; the egress is about 7 feet—214 persons per foot. This is not satisfactory, more especially as access to the area is obtained by a stair from the street. St. James's Hall, Stirling Road—This hall will accommodate about 680 persons. The egress is 4 feet—170 persons per foot. The hall is approached by a stair from the street, and the exit is very defective. While examining this building other two exits were pointed out, but as they were not connected with the hall, nor with the main staircases, we did not take them into consideration, more especially as persons before making use of them would require to pass through a small hall. Memoranda as to capacity and means of egress of churches, halls, and theatres within the city. Churches—220 of these have been surveyed within the city; of these 164 have a capacity equal to or under 70 persons to every lineal foot in breadth of exit, the doors in 93 cases open outwards, and in 71 inwards. The other 56 churches have a capacity greater than 70 to each lineal foot in breadth of exit, the doors in 24 cases open outwards, and in 32 inwards. Halls—41 have been surveyed; 17 of these have a capacity equal to or under 70 persons to every lineal foot in breadth of exit; the doors in 12 cases open outwards, and in 5 inwards. The other 24 halls have a capacity greater than 70 to each lineal foot in breadth of exit; the doors of 18 open outwards, and of 6 inwards. Theatres—There are 5 theatres in the city, 4 of which are used at present; the doors of the entire number open outwards. The whole of these have a capacity greater than 70 to each lineal foot in breadth of exit.

#### THE SOCIETY OF ARCHITECTS.

THE first general meeting of the new Society of Architects was held in Exeter Hall on Tuesday. Few people were present, and there was some difficulty in carrying out the platform arrangements. Mr. C. O. Ellison delivered an address. They were, he said, making history. The society was founded to answer the ends indicated in the Marriage Service—for mutual help and comfort. If that end were not kept in view the society would be sure to fall like other societies under the domination of some narrow clique, and possess the faults without the strength of a trades' union. Jealousy of each other should be avoided, and *esprit de corps* cultivated. This was impressed on him by the success of the Reserve Forces. The world was made up of a mixed lot of people, but they all wished their work to be done by practical men. The admission of amateurs who had taken up architecture and archaeology as an amusement, was to be avoided. Among the subjects to be avoided in discussion was the payment of architects. There was an Institute scale; but in a case of difficulty like that which arose to the speaker in the Isle of Man, no aid would be given by the Institute. A revised form of building contract was worth preparation and discussion. It often happened that the practice in the provinces was misunderstood in London. The responsibility of the architect was another subject worth their consideration. A third was the relation between an architect and public bodies. It was a growing tendency to lessen his authority over his works, while making him responsible for them, treating him as a necessary evil that required to be checked by means of a clerk of works. The ownership of drawings was also a subject that needed treatment. It would also be well to appoint a standing committee to examine and report upon new materials and inventions. A certificate from them would be more prized than medals, certificates, and awards. Exhibitions of materials and inventions could also be organised by the society. Work of this class should be made self-supporting and employed to increase the income. Conferences might be held in connection with exhibitions. Advantage should be taken of the proposed Plumbers' Conference to hold an exhibition of appliances and novelties connected with the trade. In course of time the society might aspire to be recognised as the representative body of the profession, a position which was not attained by the Institute. But that result was impossible without the aid of the country members, and Mr. Ellison suggested that the closing meeting of the session should be held in Liverpool.



## NOTES AND COMMENTS.

THE proposal for the erection of a cathedral in Liverpool has given rise from the first to much opposition. There has been none of that unanimity which so important a work should secure to itself. The selection of a style for the building and the arrangements for the architectural competition do not indicate much insight in the ruling body. The site has always been a vexed question, and we should not be surprised if it caused the wreck of the project. The objections to it are manifold. The area is too limited to allow of the erection of a large building, and from its position any church standing upon it will have to sustain a comparison with ELMES' St. George's Hall. It is hardly wise to have the Battle of the Styles once more fought over a church. Liverpool has the reputation of possessing clear-headed men of business, and a proportion of them must be represented on the Cathedral Committee. But in their choice of a site they have displayed very little sagacity, and the high-handed proceedings of a few members in making the arrangements are likely to deprive the cathedral of many of its most zealous promoters. All things considered, it would be well to allow the project to lie in abeyance for a year or two.

THE Ecclesiastical Dilapidations Act generally is heard about at diocesan conferences. On Wednesday, at Leeds, the following resolutions were adopted by the clergy of the diocese of Ripon:—"That in the opinion of this conference the Ecclesiastical Dilapidations Act of 1871 needs amendment in the following particulars, which resolution they beg to forward to the Central Council of Diocesan Conferences, in accordance with their request:—(1) That there should be a clear legal definition of the term 'dilapidations,' distinguishing between landlords' and tenants' repairs. (2) That in a benefice coming for the first time under the Act of 1871, and where the incumbent had been instituted prior to that date, half the landlord's repairs be paid for out of a loan from Queen Anne's Bounty. (3) That the ingoing or outgoing incumbent, either or both, should have power to appoint a surveyor, to act with the diocesan surveyor, and to call in, if necessary, an umpire. (4) That the responsibility of recovering the sum assessed for dilapidations should be removed from the incoming incumbent." The effect of the resolutions would be an increased employment of architectural surveyors, but the additional cost that would be entailed may have been overlooked.

THE position which architects hold in France is indicated by the constitution of the juries for the exhibition of decorative art, which is open in the Palais d'Industrie in the Champs Elysées. The president of the jury on stone is M. CHARLES GARNIER, the architect of the Opera House; and one of the vice-presidents of the jury on designs is M. MAGNE. In the group of "bois de construction" the president is M. QUESTEL, and the vice-president M. CRÉPINET. Another characteristic of the juries is the appointment of well-known art critics like M. BAZIRE and M. PAUL ARÈNE to be members.

THE vestry of the parish of St. Pancras have selected six designs out of the large number submitted in the competition for the mortuary and coroner's court. It is, however, anticipated that there will be a long delay before there is a final selection of a design, owing to difficulties in respect of the site. It was originally intended to use a part of the churchyard, but, owing to the Act which was passed lately, any interference with a metropolitan burial-ground becomes illegal. The vestry have therefore to choose a site as well as a design for the mortuary.

IN spite of the value which is attached to the slightest work by J. W. MALLARD TURNER, it is well known that there are water-colours and oil paintings by him of which the present positions have not been ascertained. A Mr. MOORE, a hair-dresser in Exeter, has been fortunate in buying for a sovereign a-piece three water-colour drawings, which Mr. RUSKIN believes to be genuine works by TURNER. The broker who possessed them had paid fifteen shillings for three! They belonged at one time to Dr. HARRIS, who was secretary of a

local society of amateurs. The drawings are uniform in size, and measure 36 inches by 24 inches, and all depict Exeter Cathedral. One shows the north transept, another the west end, and the central part of the building is seen in the third. How the drawings could be allowed to remain so long unnoticed in a cathedral town which has an art society, and is often visited by artists, is a mystery, but the annals of picture dealing are full of cases of this kind.

ONE of the most interesting questions in construction is whether concrete will serve in all cases as well as stone or brick. For indoor work there seems to be little doubt about the suitability of concrete; but for work that is exposed to the action of the atmosphere or of water there is less certainty. We have heard that the Metropolitan District Railway Company propose to remove some walls along the line which have been built in concrete, and to substitute brick walls. On the other hand, the Trustees of the Clyde Navigation propose to use the material in a position that a few years ago would be considered hazardous. A new graving dock is about to be constructed at a cost of about 80,000*l.*, and in it concrete is to take the place of granite in the bottom and "altars." It has been found that in the Liverpool docks concrete answers well. At first the engineer of the Clyde Trust, while professing his willingness to carry out the instructions of the Trustees, declined to accept the responsibility of employing concrete, which was only 2,000*l.* less than granite in cost. But, after making experiments, he has come to the conclusion that a graving dock which is perfectly watertight can be constructed with the material.

THE programme of the winter session of the Edinburgh Philosophical Institution contains some items of interest. Mr. HUBERT HERKOMER, A.R.A., will deliver two lectures on "Conventionality and Proportion in Art," and "Notoriety in Art"; Mr. R. W. COCHRAN-PATRICK, M.P., has taken "The Progress and Prospects of Scottish Archaeology" for his subject; while Dr. CLARK, the Sheriff of Lanarkshire, will deal with "Glasgow, Past and Present," in two lectures. "Archæology is also more or less connected with Professor MILLIGAN's lectures on "WYCLIF and his Work," and Dr. STORY's on "Scotland in the Days of ANDREW MELVILLE and ALEXANDER HENDERSON." "Æsthetics will not be neglected, as Professor KNIGHT will give two lectures on "Empiricism and Idealism in Literature, Art, and Life." The session will commence on November 7.

THE *Architect* may claim the credit of suggesting the advantage of photographing drawings and engravings in public collections, and of demonstrating the possibility of producing copies that for purposes of study were equal to the original. The Library Association has now given its aid in furtherance of similar experiments, and at the meeting in Dublin it was unanimously resolved "That a memorial be presented to Her Majesty's Government urging the great necessity of making, by means of photography, copies of parish registries and other important documents whether printed or manuscript; books, pamphlets, &c., in public libraries, in order that the public might be secured from the serious consequences of the loss of such documents, &c.; and further, may be supplied with copies of the same at a reasonable price." While we are glad to see our example followed, it should be noted that the authorities of museums have not hitherto been able to publish copies at a price which the public will consider reasonable. Nothing has been done to compare in cheapness with the plates after the great masters which appeared in this Journal.

THE Edinburgh Museum has secured a collection of about five hundred examples of rubbings of monumental brasses. They had been prepared by the late Miss HILL, of Southampton. The majority of them are on paper which in colour is suggestive of the original grounds, and, consequently, they are more effective than the ordinary rubbings on white paper. How the paper was coloured has not been described. The reproductions, which are all taken from English examples, are likely to prove attractive in Edinburgh, owing to the scarcity of brasses in Scottish churches.









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CENTRAL STATION

DR R. ROWLAND



1884.



HOTEL, GLASGOW.

PERSON, ARCHITECT.













"INK-PHOTO" SPRAGUE & CO. LONDON.

DESIGN FOR ADMIRAL  
[ WHITEHALL  
BY MR THOMAS POR



1<sup>st</sup> 1884.



& WAR OFFICES  
[ONT.]  
ARCHITECT.







## ILLUSTRATIONS.

THE CALEDONIAN RAILWAY CENTRAL STATION HOTEL, GLASGOW.

THIS hotel, which was opened on June 18 of last year, is at the Caledonian Railway terminus, Gordon Street, Glasgow, and takes up about 216 feet of frontage to Gordon Street, and about 302 feet to Hope Street. The tower forming the intersection of the two façades is about 205 feet in height. The main entrance to the station is from Gordon Street, and each of the seven arches may be open or shut, to suit the convenience of the traffic. The booking-hall and office, parcels' offices, and waiting, &c., rooms, are all conveniently arranged on this side, the Hope Street ground-floor being entirely taken up by the grand entrance-hall, passenger and luggage lifts, and grand staircase, which is built of marble, and takes up the whole area of the tower; also first and second-class restaurants and large smoking-room, with necessary lavatory, &c., attached. The kitchens, which are fitted up by BENHAM, of London, are conveniently situated, and have hand and hydraulic lifts connecting them with service and still-rooms, conveniently placed on the different floors. Extensive wine and beer cellars are placed in the vaults underneath the station platform, wherein also are the engine-room, boiler-house, accumulator, &c. The heating, which is by Mr. POTTER, of London, is by hot-water circulation. The electric bells and speaking-tubes throughout were fitted up by Mr. HUTCHESON, of Glasgow. Messrs. GALBRAITH & WINTON, of Glasgow, did the marble-work, and Mr. EBNER, of London, the mosaic floors. The general contractors were Messrs. WATT & WILSON, of Glasgow, and the clerk of works Mr. GEORGE KERMACK. The whole of the works were carried out under the direction of the architect, Mr. R. ROWAND ANDERSON, LL.D., of Edinburgh. The drawing, of which the illustration is a reproduction, was exhibited this year at the Royal Academy.

DESIGN FOR THE ADMIRALTY AND WAR OFFICES.

WE publish this week the design by Mr. THOMAS PORTER, architect, and next week we intend to give the last of the nine designs which formed the second competition.

## THE REREDOS IN YORK MINSTER.

DURING the last few weeks workmen have been busily engaged in decorating the reredos in the choir of York Minster, erected to the memory of the late Mrs. Markham. The reredos, as it has hitherto existed, has been incomplete through want of funds, and the late Mr. Street contemplated the colouring and gilding of it in the same rich manner as that employed in the splendid examples of Spain and Germany, of which style of decoration we still possess at home beautiful specimens in the Mediæval retables preserved at Norwich Cathedral and Westminster Abbey, and in the sumptuous screen-work of the churches in Norfolk and Devonshire. Through the liberality of the Hon. Mrs. Meynell Ingram, the scheme of decoration originally intended by Mr. Street is being carried out, under the superintendence of Messrs. Bodley & Garner, the architects to the Minster. The original elevation of the reredos having proved too low for its position in the choir of the Minster, it has been raised by the addition of a richly-carved retable or panel, with emblems of Our Lord's passion and the sacred monogram. The upper portion has been also enriched by the addition of a carved cresting and by bosses to the ends of the cross. Care, however, has been taken, while raising it sufficiently to break the line of the stone altar screen, to interfere as little as possible with the view of the window beyond. The design of the altar-piece consists of a panel modelled in terra-cotta by Mr. Tinworth, the subject of which is the Crucifixion. This panel is framed by a rich composition of niches, and tabernacle work carved in oak. The effect of the dull red colours of the terra-cotta panel and the new oak has hitherto been extremely harsh and disagreeable. This, however, has been entirely removed by the central panel being painted a delicately-toned ivory-white, relieved, according to ancient precedent, with a little gilding; while the woodwork has been coloured a deep red, enriched with gold. The entire scheme of decoration produces a very rich and harmonious effect. The wings on either side have been painted and gilded in a similar manner, the upper panels bearing scrolls, that on the north side containing the words, "Tu es Christus filius Dei vivi," and that on the south the inscription, "Sic Deus dilexit mundum. Alleluia." The lower panels have been enriched with two half-figures of angels on each side bearing shields, which are being treated in the same style of colouring as the large panel. These figures have been executed in oak by Mr. Milburn, of York. He is also engaged in

carving standing figures of angels holding scrolls, which will fill the six small niches on either side of the metal cross. These will also be similarly coloured, so as to recall the ivory and gold treatment of the central panel, and distribute the effect thereof in other parts of the reredos. An illuminated scroll has also been introduced with good effect immediately above the central canopy, containing the words specially applicable to the beautiful representation of the Crucifixion beneath, by Mr. Tinworth, viz., "Agnus Dei, qui tollis peccata mundi, miserere nobis." It is also intended to add a short Latin inscription on the south end of the reredos expressing the time and the object of its erection. The whole scheme of completion and decoration has been thoroughly and carefully considered and worked out with the greatest care by the architects and those employed by them, and, when completed, the reredos of York Minster will be one of the most stately and magnificent in the kingdom. It is expected the reredos will be finally completed and the canvas screen removed in about a fortnight.

## EXCAVATIONS IN GREECE.

EXCAVATIONS are being carried on with great activity and more or less success in various parts of Greece. Upon the site of the Temple of Asclepios, at Epidauros, and upon that of the Amphiareion, at Oropos, in Attica, the diggings, which have been going on simultaneously for some time past, have resulted in the discovery of numerous pieces of sculpture and inscriptions of value. The excavations begun several years ago on the site of the Temple of Eleusis have been resumed after a considerable pause. In all these cases the work is conducted by the Archæological Society of Athens. The Greek Government, on the other hand, has taken up a very extensive and important task in Athens itself, where it is engaged in thoroughly examining the Acropolis. Two years ago a portion of the ancient citadel, lying to the south-east of the Parthenon, was cleared by order of the Ephor, M. Eostratiades, and resulted in the discovery of numerous very beautiful and remarkable monuments and remains of ancient Attic art. It was accordingly determined thoroughly to explore the entire site of the Acropolis. The work has been begun by the new Ephor, M. Stamatakis, on a large scale, and already a considerable portion of the Mediæval and Turkish fortifications surrounding and disfiguring the hill have been demolished and removed. The appointment of M. Stamatakis as Ephor-General of the antiquities of the kingdom of Greece is the best guarantee that this important work will be carefully and thoroughly executed. For many years past the new superintendent has distinguished himself by his labours in bringing to light and preserving antiquities in all parts of Greece. The practical direction of the work of demolition and excavation has been entrusted to Dr. Dorpfeld, a German architect, who is well known for his labours in connection with Dr. Schliemann.

A paper on his discoveries at Tiryns was lately read by Dr. Schliemann at Breslau. In the course of it he said that the heyday and the great doings of Tiryns belong to a distant pre-historic epoch. Even at Homer's time the town was of high antiquity, deprived of its independence long ago, and a vassal of Argos. Researches have proved that the palace of the ancient Tirynthian kings, which occupies the whole upper citadel, had already been destroyed during a period which lies before the ken of historical record. Its ruins were hidden in a mound of rubbish, its building site had remained uninhabited, and the old castle lay waste and deserted in the midst of the small lower town which surrounded it. Dr. Schliemann during his excavations at Tiryns has come upon remnants of a house even older than the pre-historic palace. It lay about five mètres deep below the floor of the upper castle. The monochromous hand-made pottery he found in a room filled with red-brick refuse and charcoal, proved to be completely similar to that which he had discovered in the two oldest cities of Troy. Pre-historic settlement thus preceded pre-historic settlement at Tiryns. Dr. Schliemann proposes to undertake exploration in Crete.

## LUDLOW CHURCH TOWER.

THE following report on the present condition of the tower of St. Lawrence Church, Ludlow, by Mr. A. W. Blomfield, M.A., has been read at a meeting of the vestry:—I have made a careful inspection of the tower of Ludlow church, for which purpose a platform has been placed immediately below the windows of the lantern. Without this it was impossible to examine certain points with sufficient minuteness. I have now to report that the tower cannot be considered to be in a dangerous state in point of stability. On the other hand, its condition is very far from satisfactory. The walls of the lantern and the two next stages are full of cracks, most of which are no doubt old, although many show unmistakable signs of movement and extension, thus giving evidence that a sure though gradual process of dilapidation is going on, which, if not arrested ere it is too late, must ultimately cause the ruin of the fabric. The decay of the external stonework is a



more serious matter than would at first sight appear, or than it is in ordinary cases. The walls are pierced with such large openings and so deeply moulded that any loss of strength on the external face, by the disintegration of the stone, affects the general stability of the tower very materially. The weakest point of the tower is the south-west angle, which is also most exposed to the corroding effect of the weather. The north-west angle shows similar signs of weakness, though in a less degree. The whole of the west side of the tower appears to have got out a little towards the west, while the other faces remain upright. This movement no doubt began at a very early period in the history of the building. It is easily observable that the two first columns on each side of the nave lean toward the west under the pressure brought to bear on the nave arcade by the thrust of the great arches of the tower. The effect of such a movement would be to produce all the more serious cracks observable. The ringing of the bells and the pressure of exceptionally high winds on the great height of the tower would cause an oscillation of the whole fabric, constantly tending to extend these cracks and cause new ones, and as the external face becomes more disintegrated by the weather this tendency will continue to increase. Having mentioned the bells, I will add that there are some points in the method of hanging which appear open to objections, and which probably increase the bad effect of the ringing on the fabric. I believe that which I have now stated is a true account of the condition of the tower and the causes of it. There is no immediate danger, nor any present cause for apprehension, and I am of opinion that if the ringing of the bells is suspended, and they are only chimed, many years may elapse before any serious increase in the present defect is observable. The decay of the exterior must, however go on, and, unless stopped, must in time render the tower unsafe. The method hitherto employed of putting in iron cramps here and there across the cracks is, in my judgment, a very bad one, and anything of the kind would be worse than useless, and a simple waste of money. The refacing of the whole tower will have to be undertaken sooner or later if it is to be preserved at all, and there can be no doubt that the sooner it is done the better for the building, and the less the expense. If, however, the cost, which I should roughly estimate at about 6,000*l.*, precludes the possibility of doing it at present, I should advise its being left as it is, simply taking the precaution of stopping the ringing over of the bells. The refacing of the tower would of course include the complete reinstatement of all decayed and defective parts within and without, the removal of all iron cramps, the insertion of long boulders of hard stone, and generally the strengthening of the tower in such a manner as to render it sound for hundreds of years to come, while at the same time no part of the old work which could be retained with due regard to sound construction and durability would be discarded to make way for new work.

## EXTENSION OF THE BRADFORD TOWN HALL.

THE designs by Messrs. W. & R. Mawson for the enlargement of the Town Hall in Bradford (which was also designed by them) have been approved by the Corporation. The extension will provide accommodation for many years to come in the municipal, magisterial, &c., and educational departments. The appearance of the Town Hall will be improved by the amplitude which it will gain. It is proposed to allot to the various departments rooms contiguous to each other, the Town Clerk's offices, the Borough Surveyor's offices, the Waterworks Engineer's rooms, and the Gas Engineer's offices being all arranged upon the same floor. A room will also be available for the meetings of the Finance and General Purposes Committee. Another advantage of the new scheme is the provision of a subsidiary court, which, opening into a large central hall, will form a reception-room worthy of such a building.

The site of the extension will be triangular. The ground plan shows that a portion of Chapel Lane will be absorbed, and will become an interior court. At each end there will be an archway, above which will run the corridors connecting the extension with the present Town Hall. On each side of the new building there will be a street 60 feet in width, and at the end nearest to Union Street an open space of 30 yards. It is proposed to place the gas and rate offices on the ground floor at the end of the building. They will have a separate entrance, and will be lighted on the three sides by large open windows and an interior dome. The rooms of the present Town Hall on the ground floor are only 12 feet high, but it is intended that all the rooms on the ground floor of the extension shall be 20 feet high. On each side of the new building there will be a large staircase, one called the Court Staircase, the other the School Board Staircase, each having its own entrance. All the rooms connected with the administrative department of the School Board will be on this, the ground floor, raised above the pavement only about 6 inches. The School Board entrance will be from the contemplated new street. The School Board rooms have been so arranged that those which are occupied by offices frequented by the public are all on the ground-floor. The new gas and rate office will be 80 feet long by

65 feet wide, with private rooms, safes, &c. The public entrance to the gas and rate office will have double doors, which will all be the passage of an inward and outward stream of callers. There will be a counter for the public, 64 feet long, divided into a series of sections, each devoted to some special business in connection with the work of the office. Contiguous to the entrance to that portion of the ground-floor set apart for the purpose of the School Board is a waiting-room, 31 feet by 13 feet, out of which open offices for the superintendent's officers, and the inquiry-room, each 15 feet 6 inches by 22 feet. Adjoining these is the room for the school attendance officers, which is 46 feet long by 20 feet wide, and lighted by four large three-lighted windows. Next to this room, and opening out of it, and approached from the same corridor, is the examination-room, 35 feet long by 20 feet wide. Each of these rooms has two large fireplaces, and they will also be heated with hot water. Adjoining these rooms are others for the lady superintendent, the superintendent's room, and the clerks' offices. A room is provided for packing and stores, 32 feet by 16 feet. Large lavatories and cloak-rooms, lighted by open lights, are provided for the whole of this department. There is also provided on this floor a door leading into a serving-room, with servants' stairs, so that everything required for the central hall on such an occasion as a banquet can be brought in here, and very rapidly sent up to the kitchen on the top floor. For bringing prisoners from the cells on the present Town Hall premises to the Subsidiary Court, the staircase which is now used chiefly to give access to the Borough Coroner's Court will be employed, and the Coroner's Court will be removed to the new building.

One prominent feature in the arrangements of the first floor must be noted, viz., that the corridor which runs round the first floor of the present Town Hall will be continued round the entire of the first floor of the new building. Thus, a person entering the Town Hall by the main entrance, and turning to his left by the corridor till he comes to the corner room which is used by the borough magistrates, may then face about and traverse the side of the building which he is then on till he reaches the apex of the triangle which the Town Hall and the extended portion may be said to form, and then wheeling, he may return by the corridor on the other side of the building till he reaches the other extremity of the base of the triangle. In this way easy access is given to all the offices in both buildings. The corridors in the extension will, however, be 8 feet wide, or 2 feet in excess of the width of the corridors in the older building. Their level will be slightly higher than that of the Town Hall corridors, and leading to them from the latter will be a gentle flight of steps. The accommodation assigned to the School Board, on the first floor, consists of the Board-room, the clerk's office, the general office, the pay office, and committee-rooms. The Board-room extends across the end of the building, at the apex of the triangle. It is 60 feet long by 24 feet wide, and is lighted by eight two-lighted windows. In connection with it is the clerk to the Board's office, 23 feet long by 16 feet wide, and close to the Board-room and to the staircase is the general office, which is 33 feet by 23 feet; while on the other side of the staircase are the pay office and three committee-rooms. The Subsidiary Court and the central hall may be described as the kernel of the new building. They are in the middle of it, and surrounded on all sides by the various offices, but are yet directly open to staircase and corridor. The Subsidiary Court is 46 feet long by 32 feet wide, and has a lantern light. Immediately adjoining it is the central hall, which has a length of 64 feet, and is 30 feet wide, having retiring-rooms in connection with it. It is proposed to arrange the Subsidiary Court with movable fittings, except in that part occupied by the magistrates. The removal of the screen will separate the court from the central hall, and make the two rooms into one large chamber. The need of so much accommodation has been much felt, successive mayors having been compelled to entertain guests in batches for want of one room in which to entertain all together. The central hall will also be fitted with a temporary platform so as to make it suitable either alone or in conjunction with the Subsidiary Court as a meeting-room.

On the second floor of the new building it is proposed to place the Coroner's Court, a room 31 feet by 27 feet 9 inches, with a private room attached. There will also be a large apartment on this floor, to be used as a law library, having a length of 60 feet and a width of 24 feet. On this floor also will be offices in which part of the municipal work of the Town Hall, where the accommodation is becoming daily more and more inadequate, will be carried on. The plan of this floor also shows a balcony at each end of the central hall.

One great advantage in connection with the new building will be the fact that the rooms on the outside, instead of being 18 feet or 16 feet wide, as the rooms in the old building are, will be 20 feet wide. There will be a similar improvement in the matter of height, all the floors being higher than those of the Town Hall. There will be no cellar or subway accommodation, as this could not have been provided without interfering with the drain, gas, and water pipes which already lie under part of the site to be covered by the new building.

The elevation is designed upon the same lines as the present Town Hall, while the additional loftiness has enabled the architects to give greater height and width to the window openings. On



each side of the building will be a central feature, consisting of the main staircase, terminating in a large turret, and equidistant on each side from the central figure are two gables corresponding with the present west gable of the Town Hall. The ground-floor windows are square-headed and lofty. The first-floor windows are pointed with simple circular tracery, and the second-floor windows correspond with those of the present Town Hall, but are loftier and wider. The doorways are pointed, and it may be noted that for the public convenience they will have prominent notices attached to them, showing to which departments they lead. The general effect of the elevation is to harmonise as closely as the additional height of the building will allow with the present municipal buildings, and the grouping formed by the conjunction of the two similar buildings will immensely enhance the architectural appearance of the present Town Hall, which will become now the handsome front of a structure which will on each of its three sides present a facing of considerable beauty and solidity. The materials and details of construction will be practically the same as those of the present building. It may be remarked that the interior courts which will be provided will afford not only capital light through the building, but a far freer ventilation than would have been otherwise present. The size of the new building in cubic measurement will be 1,036,216 feet. With a cost per foot at the same rate as that for which the Town Hall was built the expenditure on the extension scheme would be 36,700*l.*, but building being now very much cheaper, and considering the somewhat plainer exterior and more economically-devised interior, it is estimated that the outlay on the new buildings will be limited to 30,000*l.* The Bradford School Board will occupy about one-third of the whole flooring accommodation afforded by the new buildings.

### THE CONDITION OF IRISH TOWNS.

A PAPER was read at the Sanitary Congress in Dublin by Surgeon-Major J. Wycliffe Jones on "The Insanitary State of small Irish Towns." The author said:—

The deplorable insanitary condition of several small Irish towns, in which, during various periods of my service at home, it has been my lot to be stationed in medical charge of Her Majesty's troops, has impressed me so forcibly that I feel moved to submit a brief paper upon the subject to the Congress. I feel strongly convinced that the death-rate must be high in many towns I have known; yet upon an examination of the statistics of the area into which such towns were collated I have been astonished to discover a very low rate of sickness and death. This statistical imperfection has a further important bearing. I cannot in justice condemn the condition of things in any one town as exceeding, in evil case, those of any other; for, again, I am unable to prove my case. For instance, although the insanitary state of Naas, my present station, is so bad, so deplorably bad, that every essential for healthy life is absent, I cannot state from personal observation, nor can I prove by figures, that its condition is in any degree worse than that of many other towns I have formerly resided in. A traveller on foot approaching an Irish country town, who, forsaking the high road, takes the field paths, will be much struck by the numerous little groups of workmen who meet or overtake him, as the case may be, all wending their weary way towards the one goal—the town. These are farm labourers who have walked out two to four miles to their work in the early morn, and are now—having neither lot nor part in the land upon which they have expended a day's toil—plodding their way home—to what kind of a home we shall see anon. A time there was, as I am informed, when these men, their wives and children, resided in the country, surrounded by a bright atmosphere of rural industry and humble plenty. This no longer obtains, and so rural families who have not emigrated are compelled to seek shelter in the nearest town, in which they are shamefully ill-lodged, and where they too often must submit to extortion; and further, where, from the want of employment, idle and many vicious habits are quickly learned.

I will endeavour to describe a small court of dwellings very recently visited. The entrance is in a narrow lane of cabins, and this opens to the main street of the town. Picture then a horrible little courtyard some 50 feet by 28 feet almost completely enclosed by small dwellings; the ash-pits, pigstyes, and backyards of the front row of hovels forming the only prospect possible for those inside the court. The entire block of buildings does not occupy, to the best of my judgment, nearly one rood of land, nay, indeed, the one-sixth of an acre. Upon this site are built thirteen simply frightful dens, all have damp or clay floors, pools of green and black water lie all around, black typhoid mud, and festering manure in abundance. Some fifty-five to sixty souls live in this court, and many pigs are kept. I measured several, and append a few results. No. 1 house, 5'7 by 14'2 by 6'9 equal cubic feet less than 588; four souls live here. No. 2, 15'7 by 12 by 9'6 equal cubic feet less than 1,800; five souls resident. No. 3, 15'7 by 10'8 by 9'6 equal cubic feet less than 1,500, and eight souls resident. In the first about 100 cubic feet of foul damp air could be enjoyed, in the second about 300, if no lodgers come for the night, in the third about 142. For the worst description of dwelling 15. to

15. 6*d.* per week is paid, but 2*s.* 6*d.*, 2*s.* 8*d.*, and 3*s.* is very commonly demanded even for cabins, which can, with truth, be described as "unfit for human habitation."

A very wide field of observation, both in Europe and in India, has not furnished me with any parallel to all this. In no country on the globe has human misery reached so low a degree of degradation. Picture what life must be in such dwellings, and be well assured that I furnish no isolated instance, but a true representation of what is all but universal in Irish country towns. The worst dwellings are to be found in towns owned by a number of small proprietors. In these, sub-letting of even fairly good houses is carried to a ludicrous degree. A bachelor friend of mine once obtained with difficulty in a small country town two furnished rooms in the same house; but he rented his sitting-room from one landlord and his bedroom from another. Again, in the instance mentioned of the house in which I found twenty-two souls, two or three landlords were part owners, and the third, *i.e.*, who occupied one room (himself and family), drew 8*s.* 6*d.* per week from three sets of squalid lodgers. The house pays to various owners about 34*l.* a year when quite full. I would be sorry to give that sum for the materials of which it is built. With such surroundings no one will marvel to hear that excessive drinking is too often practised in Irish towns by those housed as described; indeed, poverty or want of credit are the only checks to this vice, and it is so notorious and deplorable as to need no further notice. I fear being an undue trespasser upon your notice and time, and I, therefore, conclude with an earnest desire that a root and branch reform may ere long be applied to this wide-spread and destructive evil.

Sir R. Rawlinson said that he had come across in the course of his inspection parallel cases in Great Britain to those which were mentioned in this paper. The condition of affairs in England and Scotland, he was sorry to say, was not very different to that of Ireland. In Dublin the merchants and better classes of the population had removed into the country. The consequence was that their houses which were admirably built degenerated into tenement houses. They were divided and subdivided, and in time the windows were broken, the water supply became defective, and the sanitary arrangements were neglected.

Dr. Carpenter said that the duty of owners of land was to look after the abodes of the people. The landlord who allowed the cottages and rooms of his tenants to be in the condition which had been described in the paper was certainly failing in his duty to his country, to himself, and to everybody. The way in which mischief arose from houses being left in the condition which had been described in the paper struck the landlord eventually with a dead certainty. There could be little doubt that from time to time the establishment of the owner was occasionally visited by an arrow which had come from one of these cabins, whether from a near or great distance. If the owners of property did not provide better houses for the poor people to live in they would be unable some day to stem the tide of mischief which would arise from this cause, and which would sooner or later strike themselves home.

Surgeon-Major Hamilton said that the accommodation which was provided for soldiers and their families was in many barracks entirely inadequate. He had seen eight human beings—father, mother, and children—obliged to sleep, dress, and live in one small room in Portobello Barracks. Even this was an improvement upon the condition of affairs which had existed at Chatham some years ago, for whilst there he had seen as many as eighteen families living in one room only divided from each other by partitions made of sheets hung up between each.

The Hon. Henry Bruen said that he did not think that the state of affairs which had been described in the paper was universal in Ireland. They were all aware that Parliament had made provisions enabling owners to borrow money for the erection of labourers' cottages, and he thought these provisions should be made applicable to towns as well as country parts. The cases which had been cited he believed were isolated cases.

Surgeon-Major Jones replied, and said that he had always found that in cases where villages were owned by landlords, they were in a better condition, from a sanitary point of view, than if they were in the hands of small owners.

### BUILDING IN GLASGOW.

A MEETING of the Glasgow Dean of Guild Court was held a few days ago, and as it was the last prior to the annual election of the members the Lord Dean followed the practice of the Court by giving an abstract of the business which had been brought before him during the year. His Lordship said:—The linings that have been granted are 224, of an estimated value of 697,005*l.*, the largest amount since 1874, when it was 755,717*l.* These figures, when first looked at, seemed to indicate returning prosperity, but when closely examined they are not so satisfactory, as nearly half the amount is represented by Corporation buildings, churches, and schools, and these may be termed dead or unproductive investments, only giving indication of increased taxation, and not yielding a material return. If the work had



been required entirely by the wants of the population, I fear there would have been very little employment for the working classes, as only plans of 587 houses have been passed. Of these, 97 houses are of one apartment, 258 of two, 196 of three, and only 2 houses of five, and none above this. The eastern and northern districts show the smallest increase. It may be interesting to note that during the last seven years the value of the buildings approved by this Court was 3,521,395 $\frac{1}{2}$ ., and the number of dwelling-houses 3,935, and each year seems to point to a smaller class of house being required. This fact should have the attention of our municipal authorities, as taxation is thus falling year by year more proportionally upon the working classes, and this is likely to increase, as, owing to the use of the telephone and other causes, large warehouses are being removed outside the municipality, and only small places retained for showing samples.

### EASTBOURNE MUNICIPAL BUILDINGS.

ON Thursday the memorial-stone of the new Town Hall and Municipal Buildings in Eastbourne was laid by Lord Edward Cavendish, M.P. The site, which has an extensive frontage, is situate in Grange Road, and is peculiar, inasmuch as four thoroughfares meet there, and for several reasons it was thought best to place the buildings, which are some 200 feet in length, longitudinally and parallel with the line of frontage.

The design is an adaptation of the Renaissance style of architecture, the materials used for all the elevations being best dark red brick, with a liberal use of Portland stone dressings. The roofs will be covered with Westmoreland green slates, the cresting and roof terminations being of ornamental ironwork; the glazing of the windows will include where desirable specially designed stained glass.

The main entrance is beneath the tower, and will be approached by a handsome stone open portico and flights of steps returned at the sides. The tower will rise to a height of 130 feet above the general level, and provision is made therein for a set of Cambridge chimes, and a clock having four faces, illuminated at night.

The ground floor on the one side provides for a police or county court 48 feet by 28 feet, and 23 feet in height, with ample approaches, large general waiting-hall, female witnesses-room, barristers and solicitors' retiring-room, magistrates clerk's room, county court offices, and also a judge and magistrate's retiring-room, with ante communicating direct with the court and Bench. The basement of the court is occupied by the police offices. In a main longitudinal corridor are the accountants', rate-collectors', and inspector of nuisances', and the medical officers' room. The principal entrance gives access to the grand staircase hall, 32 feet by 21 feet 6 inches, and which rises to a height of 33 feet, having marble pilasters and enriched ceiling, and in the rear of the grand staircase are the public cloak-rooms and lavatories. The remainder of the ground floor comprises a large committee-room, an open area, a lift, the borough and building surveyors' offices, with side entrance. There are also a suite of spare offices, and caretaker's department. A public mortuary will be placed in the rear of the buildings.

On the first or principal floor is the town hall, approached from the principal staircase landing at one end, and also by a secondary staircase with retiring-rooms at the platform end. The hall is 83 feet long by a width of 45 feet, exclusive of orchestra, and it is 26 feet in height in the coved and enriched compartments of the ceiling, the walls between the windows having engaged marble pilasters and panelled dado, and the floor will be laid with oak. The windows are arranged on each side of the hall, and are recessed. From the principal landing, and from the town hall, doors communicate with the reception chamber, which is under the tower. This apartment is circular on plan, and 18 feet in diameter, by a height of 26 feet into a domed ceiling, which will be ribbed and enriched. The floor will be laid with parquet. There is also a mayor's parlour and ante, having a length of 35 feet by a width of 17 feet, and contiguous to these are the town clerk's offices and muniment-room. There is also a council chamber, 40 feet by 28 feet, with waiting, retiring, and robing rooms; and the council chamber will be panelled and laid with oak. Thus the chief civic apartments are *en suite* and on one floor. The upper portions of the buildings are devoted to spare offices and store-rooms.

The whole of the floors will be of fireproof construction, and all the joinery throughout is to be of wainscot oak. All the external walls, which are of very substantial thicknesses, are being built hollow, and tied with Jennings's vitrified brick ties. The walls of the basements are for the most part lined with best white glazed bricks. All the staircases will be of stone, and the corridors and passages will be laid with tiles; the walls of all lavatories, &c., being lined with the same material.

Special attention is being directed to the thorough ventilation of every apartment, and the latest improvements in that direction will be introduced; the heating, independently of the use of open fires, will be by means of hot water or steam.

The work is being carried out by Mr. James Peerless, contractor, of Eastbourne, and Mr. W. T. Vale, of London, is the clerk of works. It is expected that the buildings will be ready for occupation about Midsummer 1886, and the cost, exclusive of the site and furniture, will be upwards of 30,000 $\frac{1}{2}$ l. The architect is Mr. W. Tadman Foulkes, of 100 Colmore Row, Birmingham, whose original plans were selected for the first premium in a competition as far back as April 1880.

### HOMES OF THE WORKING CLASSES IN DUBLIN.\*

THE difficulties of dealing with the rehousing of the poor by general legislation are very great, owing to the diversities of conditions in different towns being such as to call for legislation of a local character. Among these may be mentioned the habits of the population; the development of various industries demanding space; schemes for railway improvements, selecting, where possible, poorer localities; movements of population out of towns to suburbs enjoying better-class houses. A more important difference perhaps is that between the growth of popular opinion on the subject in various towns. We have, on the one hand, the example of Glasgow, which twenty years ago recognised the evils caused by its then condition, and led the van in this great work; and, on the other, the case of an English town, where the local authority took preliminary steps under both Sir R. Cross's and Mr. Torrens's Acts, but abandoned them, notwithstanding the representations of their medical officers of health, and finally questioned the right of the Local Government Board to interfere in the matter. In 1871 there were, out of a total number of 58,327 families, 44,933, or 77 per cent., living in 10,954 tenement houses, being 4.1 families to each house—the term "tenement" being applied to all houses, of whatever size, accommodating more than one family. In 1881, out of 54,725 families, 39,997, or 73 per cent., lived in 9,854 tenement houses, or 4.05 families per house. The number of persons to each family had, however, increased from 4.2 in 1871 to 4.5 in 1881. Of 1,100 tenement houses which have disappeared, 1,053, occupied by 4,659 families, contained more than ten rooms, and from two to six families each. It is certain that this decrease would have been much larger but for the constant supply of first-class single houses, which have lapsed into tenement houses. The statistics also show that while the decrease of families of all classes amounted to 3,538, those occupying tenemental dwellings have decreased by 4,948, and that the difference represents 1,413 families who have advanced to single-house accommodation. On the whole, we have the broad fact that in 1871 77 per cent. of the families in Dublin, or 188,769 persons, lived in tenement houses, and that this proportion was only reduced to 73 per cent., or 182,278 persons, in 1881. With reference to the condition of these houses, it was sworn before the Royal Sanitary Commission in Dublin in 1879 that of 9,760 which then existed, 2,360 were unfit for human habitation, 3,500 were repairable, and 4,000 in better condition.

Compensation for trade disturbance is the most difficult question of all to deal with by general legislation, and the Select Committee could not see their way further on this point than to make a recommendation to arbitrators to consider well in all cases whether the trader has not the option of setting up his trade somewhere in the immediate neighbourhood without positive injury. While, on the one hand, there is no doubt that in Dublin many small traders, whose tenancies are monthly, and even weekly, have suffered hardship from compulsory removal without compensation, it is equally true that the small trader who gets moderate compensation for disturbance, and has the chance of setting up his business in any other district he likes, is much better off than the trader who lives across the street, gets no compensation, loses his business through the clearance of an area, and finds, when the area is re-peopled, that the new inhabitants are of a class quite different to that which patronised his wares. I know of several such instances in the Coombe area.

Having pointed out the improvements which have been made in the Act since the adoption of two schemes in Dublin, I may be permitted to urge the importance of taking fresh action. Although of the nine areas reported under the Act as unhealthy in 1876, five have been practically cleared, those remaining are in a much worse condition than then, and there are other areas for which there is no effective remedy but demolition and reconstruction. Believing that a large number of the richer inhabitants have no idea of the depths of misery, filth, and degradation in which a large proportion of the population exist, I append a description of Plunket Street area, kindly supplied to me by Mr. Harty, C.E., assistant engineer to the Corporation, who acts as surveyor to the Artisans' Dwelling Committee of that body:—"Accordingly as the houses in Plunket Street area were taken over by the Corporation for demolition, they were found to be in a shocking state. House

\* A paper by Mr. Edward Stanhope, M.A., read at the Congress of the Sanitary Institute in Dublin.



after house was in a most foul and filthy condition—which almost beggars description—and the stench through the houses was most intolerable from human filth, which was allowed to accumulate on the landings, stairs, floors, &c., and actually, when taking down the houses it was found that between the flooring-boards and ceilings underneath, filth and dirt of all sorts were packed so tightly as to become one solid mass; holes were cut in shop-floors so as to make a common privy, thus making the basement the receptacle of filth; floors in the drawing-rooms and top storeys were partly removed, so that there was actually no privacy in several of the rooms; filthy chaff-beds were found by me in several places emptied out on the floors, the inhabitants not taking the trouble to remove the rubbish into the back yards; the smell was so intolerable in some instances that I had to leave the houses quicker than I went in. In a great many of the houses, especially in Blackhall Row, old tubs, crocks, cans, and buckets were found filled with night soil, and hid away in the roof and other out-of-the-way places, the removal of which was anything but pleasant to the men. The workmen were often literally covered with fleas, &c., and had to run away from their work and scrape each other's clothes with sticks in order to remove them—the colour of their clothes was hardly discernible. Beds and furniture of the simplest kind were a luxury, unknown in several instances." Bad as is the condition of things as described here, it is not a bit worse than large portions of the poorer parts of London, where, for example, in a street containing 41 houses inhabited by costermongers, 40 privies are utilised as stables for the donkeys, and one is reserved for human beings.

Everyone who knows Dublin will be struck by the large number of abandoned houses to be seen in comparatively respectable streets, and will not fail to observe the gradual injury inflicted by the condition of such houses on the adjoining ones. A great number of these houses have been closed by the medical officer of health as unfit for human habitation, or by the surveyor as structurally dangerous. The great difficulty which would be met with in Dublin in carrying out proceedings under this Act is to fix the liability on the rightful owner. The definition of the word "owner" must be specially noted. He is any person who is enabled to sell land or premises, and all lessees or mortgagees except persons who are entitled to the rents and profits for a less period than twenty-one years. The value of this provision can best be appreciated when we consider that in the Coombe area the amount awarded to tenants, including costs, who held for less than twenty-one years was 1,980*l.* 19*s.* 2*d.*, or 12 per cent. of the entire award; and the justice of it will be apparent when it is remembered that a large proportion of tenement houses in Dublin is in the hands of those whose margin of gain is the difference between due regard for and gross violation of the laws of health and decency. There are a large number of courts and alleys in Dublin which would be greatly benefited by the removal of the buildings between them and the thoroughfares, which not only obstruct light and air, but cut off the inhabitants from the public gaze. In this way the richer inhabitants would be shown under what conditions so many of their poorer brethren live; and the occupants of these courts would gain from being under the eyes of their fellow-citizens.

The Labouring Classes Lodging Houses and Dwellings Act (Ireland), 1866, provides for the advance of public money by the Commissioners of Public Works in Ireland for the objects stated in the title of the Act, subject to certain conditions for the repayment of such loans. The period of repayment is limited to forty years as a maximum, and the rate of interest to 4 per cent. minimum. In 1883 the directors of the Dublin Artisans' Dwellings Company made a representation to Government, requesting that the periods of repayments should be extended to forty years, as in the Act of 1866, instancing the analogy of the Public Health (Ireland) Act, by which loans for sanitary purposes are granted at 3½ per cent., and the repayments spread over fifty years; and offering, in case the application was granted, to largely extend their operations. The request was, however, refused.

The greatest bar to the improvement of the homes of the working classes in Dublin is the present anomalous condition of the valuation of property. This affects not only the provision of such dwellings, but the improvement of every class of buildings. Passing to the houses of the working classes, and selecting at random seven tenement houses in various parts of the city, and seven improved dwellings, the valuation of each being the same, viz., 9*l.*, or 63*l.* for all, I find the annual rental of the old houses to be 322*l.*, of the new 118*l.* That is to say, the proprietors of the tenemental dwellings contribute 10 per cent. of their income to the rates, while the owners of the new dwellings pay 27 per cent. of their income to the rates. This inequality pressed on the very class we are supposed to be benefiting, as the following facts will show. I have investigated the present and former rents paid by 427 of the tenants of the Dublin Artisans' Dwellings Company, and find the present rent to average 5*s.* 3*d.* per week, the former rent 4*s.* 3*d.* Dividing these gross rents into the two items of "rent" and "taxes," and applying the proportion of taxes to rent given above, it will be seen that the "rent" of the new dwelling is 3*s.* 10*d.* and taxes 1*s.* 5*d.*; while the "rent" of the tenemental dwellings is 3*s.* 10*d.*, and taxes 5*d.*; it will be therefore seen that

the extra price which the tenant pays for the improved accommodation is made up entirely of increased taxation. If a revaluation were ordered, and the expense provided for (which can only be done by legislation), the effect would be, as far as Dublin is concerned, unequal and unjust. The valuation must be made according to unions or baronies, and the boundaries of these areas are not continuous with those of the municipal district. The result would be that if the city were revalued the new valuation would be much out of proportion with the existing valuations of the portions of the North and South Dublin Unions that are outside the city.

The number of tenement houses in Dublin is being constantly increased by the conversion of single dwellings, and diminished by natural decay, demolition, or by being closed for want of sanitary accommodation. Accommodation has been within a comparatively brief period provided, or is being provided, for 1,816 of the artisan and labouring class, and for 800 of a slightly superior class; in all, 2,616 families, representing about 16,000 persons. Although the necessity in Dublin for the demolition of old, substitution of new, and adaptation and maintenance of repairable dwellings is exceptionally great, it must be admitted that within the past few years special efforts have been made, both by the local authority and by public and private enterprise, to meet the necessity; and it is worthy of notice that Dublin is one of three cities in the United Kingdom which have carried out more than one improvement scheme under Sir R. Cross's Acts. And in dealing with the question it must always be borne in mind that a difference exists between "house" and "home," and the improvement of the homes of the working classes does not altogether depend on the provision of suitable abodes, but to a very great extent on the education of the classes themselves. While many of the working classes eagerly embrace the opportunity of improving their domestic condition, afforded by the provision of new dwellings, there is, as is natural, a great deal of ignorance, of prejudice, and of obstinacy to be met with, and there is a large population in Dublin whose opinions on the subject of improved dwellings may be indicated by the aspiration of the old woman who, after gazing on the rows of new cottages in the Coombe thoroughfares, exclaimed, "God be with the good old times when there was no knockers on the hall doors!"

### THE LION OF ST. MARK.

THE following account of the Lion which surmounts the column in the Piazzetta, Venice, appears in the American *Architect*, and is signed "Giacomo Boni." The figure was removed by Napoleon, and placed on the esplanade of the Invalides. It was brought back from Paris in 1815, was restored by the sculptor Bartolomeo Ferrari, and raised to the top of the column on April 17, 1817:—

On the morning of the 18th of September, 1883, the grass was to be extirpated from the summit of the columns of the Piazzetta. Two ladders had been joined together in order to reach the capitals, whose height from the ground surpasses fifteen mètres. I climbed up myself, and setting my foot upon the capital, the size of which is three mètres square, I felt myself small, so colossal seemed the lion, whose wings reach one and one-half times the height of a man. In order to accustom myself to the proportions of the lion, I went all around it. It is composed of several pieces held together by an iron framework, the bolts of which, oxidising, have moved or entirely forced off the copper sheets covering them. Two fragments of bronze, broken by the rusting of the iron, have fallen from under the stomach, showing that the cast is, more or less, one centimètre thick.

The pieces of which the lion is composed belong to different epochs. The most ancient ones are fortunately the most numerous, and belong to the time when the Doge Ziani erected these columns (1176). The others belong to subsequent renewals and the Napoleonic restorations, recognisable from the classicism of the modelling. The right fore-leg, half of the left one, half of the right hind-leg, and the foot of the left one are not original. It is a pity that not one of the original paws remains, because the present ones have not the sentiment of any epoch: they are of indifferent workmanship. Tufts of hair upon the head have been replaced. The book held under the fore-paws is of lead. The wings are not only detached from the other parts of the lion, but they belong evidently to a recent period; however, there were wings before, of which some traces are left, which we will notice later. The tail has also been restored.

All the rest, that is to say the head, the mane, and the body, is original. The modelling of some parts, where the ancient Venetian *aurifex* thought proper to take special care of it, is really perfect. In order to convince one's self of it, it would be sufficient to note the muscles, sinews, and veins of the paws not wholly restored or renewed. There is not any ostentation or affectation of anatomical knowledge; the artist has only indicated what contributes to the majesty of a symbolical animal.

On seizing the jaws of the lion and looking into his mouth, I perceived the whole internal cavity. The jaws are armed with canine and molar teeth of most accurate workmanship; the skin is drawn into ridges, and conveys the impression that it is covered



with hair at the sides of the mouth, which, when seen closely, loses completely its grotesque grimace. A pair of whiskers, grooved from single pieces, represents the long bristles of the feline species. The eye-sockets are strongly marked; the brows are muscular and rounded. The eyes seem of a glassy substance, which is white and cut into triangular facets; the right eye sends from the bottom reddish reflections; they are a restoration, and are said to be of rock crystal, but they have not its transparency. The old guide-books do not mention the colour which they had before; certainly they were not white, because they would have given a strange expression to the head of the lion, or, like the present ones, would have made him appear blind. The choroid of the feline, like the chrysolite in an Italian poem of the thirteenth century, "casts rays of the colour of fire." If the eyes were not inlaid with such jewels, there could be set either carnelian or chrysoprases, or any other quartz *gatteggiante*. The eyes could also be even more fiery, without detracting from the effect of the bronze, if composed of one or more red gems.

The tufts of the mane begin at the neck and ears, where they are short and hooked, then developing into long, symmetrical locks, a lower one between two upper, run down the breast and lose themselves at the middle of the back. Every lock is formed of five or six cords, half a centimètre thick, flowing in serpentine form to a point, leaving the last undulation detached and raised, so that the mane is all bristling. Where the mane goes down along the shoulders, it covers the feathers of the base of the ancient wings; feathers may also be seen along the right side. These feathers are crudely cut for the insertion of the new wings. The difference between the original wings and the restored ones is plain; while the feathers of the first are concaved and uncut, those of the restored wings are convex and cut, making them more realistic. The ancient wings were nearer to each other and closer to the neck, as the original feathers are found where the mane reaches them, while the restored wings commence further down. As to the form, the ancient wings must have participated in that solemnity which, inspiring itself from sublimity, does not descend to despicable details; the severe line which the head forms with the mane and the body, may give an idea of their grand simplicity. Mr. Ruskin, with the intuition which is natural to him, arrived at the supposition that the ancient wings were far wider in their sweep than these, and "shred into plumage." ("St. Mark's Rest," i. 22.) The custom of cutting the wings, so that light might be seen between the feathers, was introduced by the Byzantines in their mosaics, and Giotto adopted it for the wings of angels. He was imitated by the artists of the fifteenth century, who painted lions of St. Mark, like Jacobello del Fiore and the *Donatus Venetus*, who kept themselves to the symbolic form of the wings. The lion of bronze must have had, for a stronger reason, the wing cut into plumes, in order to be perceived against the sky. There remains to us a meagre record of them in the wood engraving of Breydenbach (1486). In a picture of Bassano, in the great Council Hall, where is painted upon a grand scale the column of the Piazzetta, we perceive the lion with the wings cut in strips, and although, being only an accessory, the painter cared not to give it special expression, the material fact has not escaped him that the plumes were detached one from the other.

The lion was once gilded. I have found the traces of gold in the protected portions of the upper jaw. Under the stomach there is a little door, restored, through which one could pass into his head; but it is now locked; I do not know why. I was unable to find any inscription on the ancient cast, or anything referring to the restorations. There are some initials, but they are recent and of no importance. I left the two fragments of bronze as I found them, lying upon the top capital. This Lion of St. Mark, the symbol of the Venetian Republic, is admirable in so far as it expresses fierceness and magnanimous power. It looks far away, and, pressing its paws firmly against the book, seems to send to the Orient a roaring of defiance. Mr. Ruskin could not fail to perceive the beauty of "one of the grandest things produced by Mediæval art," and judged it a work of the thirteenth century. ("Stones of Venice," iii. 233.) The name of an *Aurifex Venetus*, of the year 1300, is found upon the bronze railings of the church of St. Mark, and Vasari tells that the doors of the Florentine Baptistery, modelled by Andrea Pisano, were cast in bronze by Venetian masters "very skilful in casting metals." But I believe that our bronze lion is anterior to these works, and therefore anterior also to the *St. Theodore*, of stone, which, according to Sansovino, was erected upon the other column of the Piazzetta in the beginning of the fourteenth century. Without pretending that the lion was placed upon the column soon after it was erected by the Doge Ziani, we may grant that in the thirteenth century there were *magistri Veneti* capable of undertaking such a work, if, shortly after, a good reputation followed them into Tuscany.

Mr. A. Cappello has carried out the enamel mosaic decorations in the new town hall of Leamington. In the tympanum is a figure of Hygeia, with figures of winged boys at the sides pouring water from vases, and thus symbolising the mineral waters of the town. There is also a circular panel representing Justice.



### "The State and Art."

SIR,—I am very much obliged to you for the two articles (September 20 and October 4) in which you have treated of the brochure I have published on the relation of Architecture and Public Buildings to School, Academy, and State in Paris and London; and I shall be still further obliged if you will grant me space to comment upon one or two statements made in your thoughtful review, and to add a few remarks which seem to grow out of it.

In England the terms "academy" and "school" are synonymous. To speak of an academy for young gentlemen is, as everybody knows, only an aristocratic way of describing a preparatory school for boys. Indeed, the very courteous acknowledgment I received from the South Kensington Museum of the offering I made to its library of my little book, contained the full title, with the exception of the word "academy," which was scrupulously omitted. But the distinction between an academy and a school is clearly defined by our neighbours, and although the former term has been often misapplied in France, it has never suffered such vicissitudes in that country as it has endured in this. According to Littré, "Académie" is a "compagnie de gens de lettres, de savants, ou d'artistes." Further on he explains, "L'Académie, dépositaire des bienséances et de la pureté du goût." His principal definition of a school is equally clear. "Ecole est un établissement où l'on enseigne les éléments des lettres, des sciences, des arts." Now when any one conversant with French institutions speaks of "the Academy," he means the Académie Française, which is a body of forty distinguished men famous chiefly in literature. It includes the Duc de Broglie and Victor Hugo; Emile Ollivier, of the light heart, and John Lemoine, the press-writer; the Duc d'Aumale and Sardou, the playwright. The other four academies are always necessarily distinguished by their names, such as that of Science, of Inscriptions, of Fine Arts, and of Moral and Political Science. The members of the five academies are known as "membres de l'Institut de France," and the title of "académicien" is rarely used. Now pardon me if I state that your reviewer is not so clear on this subject as his evident familiarity with French history might lead one to expect. "At the Revolution," he maintains, "when inquisition was made into abuses, the Academy was spared." But which academy? All the academies and kindred societies were spared in 1789 when the Revolution broke out; they were all suppressed in 1793, and the grants hitherto made to them discontinued. Nothing more was heard of the term "academy" until the reign of Louis XVIII., when the "Classe des Beaux-arts" became the "Académie royale des Beaux-arts," and the three other "classes" composing the Institut de France became respectively the "Académie Française" (the old title), the "Académie royale des Sciences," and the "Académie royale des Inscriptions et Belles-lettres." Except that the word "royale" has been omitted in every instance and that another academy has been added, the organisation of 1816 has continued to the present time, and the five academies meet in turn and together under the dome of the Palais de l'Institut, originally the Collège Mazarin, or the Collège des quatre nations. It is noteworthy that an iconoclastic republic, a destroyer also of kings and nobles, founded this great community for the furtherance of literature, science, and art by a decree dated Oct. 25, 1795, and forbade any other French federation to take the name of "Institut," a rule which is still observed. Even more, a republic continues to support this great institution, and has done more to increase the value and usefulness of the School of Fine Arts, in the Rue Bonaparte, than any one of the sovereigns who preceded it.

The reforms of 1864-65 completed the separation of the School, from the Academy of Fine Arts, a separation which was begun in 1816, when Debret (whose daughter Duban married) was ordered to convert the old convent buildings—until then used as a museum—into a school for the instruction of painting, sculpture, and architecture. Until Viollet-le-Duc's attacks roused the ministers of Napoleon III. to action, the Academy of Fine Arts enjoyed as much immunity from State control or public inquiry as our own Royal Academy does at the present moment. It deliberated in "general assemblies" and in secret. It gave little account of its expenditure to the Minister of the Crown who was responsible for the grants made to it, and it answered him very much in the same fashion as our own Royal Academy appears to have recently answered Mr. Gladstone in the matter of the Chantrey Bequest. All this was wisely rectified in 1865, and the advantages of the School of Fine Arts, hitherto restricted to few, have been since enjoyed by many. At the same time the Academy of Fine Arts, recognised as a tribunal of experts, entered upon a new life; and it has since enjoyed greater prestige than before. Ten years afterwards it received Paul Abadie, who was what in England is called "a Gothic man," and who had never gained the honours which admit a student to the Academy of France at Rome.



Your reviewer infers that I ascribe the foundation of the French school to Colbert. He also half likens the Communauté de St.-Luc to the Incorporated Society of Artists, which met in St. Martin's Lane. *Grands dieux!* as Thackeray would have exclaimed. The Académie de St.-Luc, as it was ultimately called, had existed for nearly four hundred years when the famous medal which recorded its decease was struck, having been founded at the close of the fourteenth century. The Incorporated Society only came into any sort of existence about the time when the Académie de St.-Luc was preparing for its last agonies, and the two expired together. Again, it would be impossible for anyone with an historical knowledge of the Abbey of Cluny to ascribe the foundation of "the French school" to Colbert. The early dissemination of art by men trained in that cosmopolitan centre, and its radiation thence into Germany, England, Spain, and even Italy, are known to all who have studied the history of Mediæval architecture and the subsidiary arts. The Communauté de St.-Luc was one of the Mediæval guilds; that it was able to weather the storms of the Renaissance is evidence of its original worth and power. Academies came in with all the notes and sketches and casts which Philibert Delorme, who measured the principal buildings in Rome before 1536, and Poussin and Lebrun, master and pupil, who lived under the same roof in Rome before 1640, brought or sent to France. Was not Mazarin an Italian? and were not the great cities of Italy to the French and English travellers of that day very much what Paris and Vienna now are to the student from Stockholm or Copenhagen, or even Canada and the United States? The foundation of the "academic system" in France is undoubtedly due to Colbert, who would not accept the "laissez-faire" principle even in commerce. He did not certainly found the Academy of Painting and Sculpture (Lebrun's Academy), which was recognised in 1648. At that time Colbert was barely thirty. If he had already been introduced to Mazarin, which is doubtful, he was merely the cardinal's amanuensis or private secretary. It is well to be particular on this point, because Victor Baltard, in his "Villa Médicis," twice makes the slip of attributing the foundation of that Academy to Colbert, and confirms his error by adding the date, namely, "en 1648." The fact is, the intention to found an Academy of Painting and Sculpture had been long uppermost in many men's minds, for Blondel states that that Academy owed its first institution to the care and protection of Monseigneur des Noyers, a Secretary of State who retired in 1463 and died in 1645.

Your reviewer also infers that architects were not associated until 1720 with the Academy, meaning, I presume, the Academy of Painting and Sculpture. True, the first architect-student who was sent to Rome by that Academy was Dorisot, in 1720; but many had been sent there previously; and Wren, in the "Parentalia," distinctly states that "an academy of painters, sculptors, architects, and the chief artificers of the Louvre, meet every first and last Saturday of the month." He wrote that in 1665. The Academy of Architecture, founded by Colbert in 1671, met twice a week by the king's orders, and Blondel's first presidential address, delivered in 1675, is a noble piece of exhortation. Though that Academy received no charter until 1717, it educated the French architects of the last quarter of the seventeenth and the whole of the eighteenth century—men who carried the fame of their country into all parts of Europe, and even into Asia. That from the time of "Du Bos in 1719 to Viollet-le-Duc in 1864 there has been unceasing grumbling at the defects of the academic system" is indisputable. Nay, more, it is going on still. M. Ruprich-Robert has recently attacked in an able manner the French system of architectural education, M. Hénard has with equal ability defended it; and only last week I was enabled to hand the two pamphlets to the librarian of the Institute of Architects.

A clause in the second charter granted to the Academy of Painting and Sculpture contains words of a most suggestive character. This deed was executed in 1777 under Louis XVI., and by it the two arts of painting and sculpture were "assimilated with letters, science, and the other liberal arts, *especially architecture.*" Pray mark the distinction well, for it shows that hitherto the supremacy of architecture had been generally acknowledged. In the course of the hundred years which have followed, the painters have not only maintained the position then accorded to them, but they have gradually risen to a higher one. From the beginning of this century the order of precedence has been (1) painting, (2) sculpture, and (3) architecture. Nevertheless, the whirligig of Time may yet give the last-named its revenge, and the coming race may yet prove that the late Lord Lytton was, if a satirist, a prophet besides. In this country a social revolution is taking place quietly, the consequences of which neither men nor women care to discuss, even though it be felt that the next century may see them struggling, not in the character of mates and helpmates, but as foes in fierce competition with each other. Nowhere will this be felt more acutely than in those arts "that require rather the finger than the arm," in which, as Bacon says in his essay on "The True Greatness of Kingdoms and Estates," the ancient states of Sparta, Athens, Rome, and others, "had the use of slaves, which commonly did rid those manufactures." Indeed, if Pliny may be credited, some of the Roman painters were women, and surely painting and modelling rank in Bacon's

category. Facts have shown also that a great painter need not necessarily be a man of mental power. At the end of last year half, or nearly half, of the students who attended the schools of the Royal Academy in London were ladies. The number of students entered on the books amounted to four hundred, of whom about two hundred and fifty usually attended. Of these nearly half—about one hundred and twenty—were females, and it goes without saying that their ambition reaches no further than to wield the brush and palette, or to manipulate moist clay. I have a theory on this point, and am rash enough to risk ridicule about it. The Royal Academy, ere long, will be forced to open its portals to strong, refined, and cultured women who have learned to paint or model. Then, as time jogs on, the sculptors and architects, if not previously driven out, will leave the Royal Academy of their own accord. The more effeminate, bodily and mentally regarded, of the males may remain, say a few draughtsmen to represent architecture, and a few modellers sculpture, but in the end the majority of the painters will be women. Sculptors, in the true sense of the term, and architects who are properly trained, and who have acquired experience, need nurse no similar suspicion. The muscular character of the work demanded of the former, and the mental power necessary for the due performance of the other's duties, are proof against the encroachments of the "softer man." As far as this country is concerned, I give painting another twenty years of supremacy—no more. The sentiment which thirty years ago the sorrows of "Clive Newcome Esq." inspired in the swollen breast of Bull will have evaporated by that time.

Your reviewer believes that the day has gone by when a repetition of the honours paid to a Bernini is possible or probable. I do not think so. At the worst, the English of the present day have shown an alacrity in burying architects which might have astonished the Grand Monarch. In twenty-five years four have received funeral honours almost national in character. Cockerell in St. Paul's Cathedral, Barry, Scott, and Street (the last not without a protest) in Westminster Abbey, were lowered to their graves with a pomp and solemnity far above the magnificent affectation of Louis XIV. Indeed, the respect ostentatiously entertained in France for the eight architect-academicians is genuine, as such things go, for it is largely inspired by patriotism and self-love. The Paris "rough," who would hoot a prince, doffs his cap naturally in the presence of M. Questel or M. Ballu.

I shall always esteem it good fortune to have been enabled to converse freely with many distinguished architects, both of France and England. The first time I went over the works of the new Cour de Cassation, in Paris, in company with its architect, I ventured to say to him that we in England knew more of his half namesake, Viollet-le-Duc, than of himself. This was soon after the reforms of 1865. Louis Duc looked hard at me, then cautiously around, and whispered "un habile dessinateur," his tone and manner showing that he did not intend a compliment. Burges astonished me in the same fashion about ten years ago. Holding strong views on mental and manual experience in matters of architecture, his advice to the student-traveller was—"Make copious notes of any building you visit, look at it well, measure parts of it, compare them with other parts of contemporaneous works, put your thoughts thereon upon paper, but don't make pretty sketches." Eugène Millet was of the same opinion, and proved it by his practice. The slightest inquiry into the recorded views of the great thinkers on architecture suffices to show that their ideal of an ordinary architect was far removed from that which obtains at the present day in England, and is blindly accepted by the profession as well as the public. Semper thought that an architect should, when a student, be trained in literature and the sciences, especially in mathematics. Quatremère de Quincy begins his life of Blondel with the words—"Une sorte de singularité a voulu que les auteurs des trois monuments que la France place en tête de ses plus célèbres ouvrages d'architecture, n'aient point fait de cet art leur profession spéciale." The first architect of the Louvre, Pierre Lescot, was an ecclesiastic; Claude Perrault, who designed the famous portico, was a doctor of medicine; François Blondel, the architect of the beautiful arch at the Porte St.-Denis, had been employed on diplomatic missions, had travelled for years, had taught mathematics, and was the dauphin's tutor before he commenced the practice of architecture in 1665, at the age of forty-seven, and sought a livelihood by it. Inigo Jones, Sir Christopher Wren, Sir William Chambers, were men of vast experience, acquired under similarly extended conditions, who served an apprenticeship to the world, and who, if anything, were scientific before they took to architecture as an art and a profession. I often wonder whether the young gentlemen who in this country have set up as "architects," after having served three years in a practitioner's office, have ever read the lives of those without whom the profession of architecture would not have existed. Finally, let me go back to the thirteenth century. I cannot think that the men who devised the cathedrals, castles, and town halls of that period were simply the artificers who built them, and who drew full-size the various portions of the work on the ground or on a wall, just as French carpenters and stonemasons do now. I think they were men who spent the early years of life in the Abbey or University of Cluny, or in one



of its many branches, men who travelled to distant lands, taking necessarily a long time to do so, and staying for long periods in the chief ecclesiastical centres. No doubt in the fourteenth and fifteenth centuries, when traditions had accumulated, and could be preserved or handed down, the workman was employed to design as well as build. The words of Philibert Delorme seem to confirm this, for in the middle of the sixteenth century he wrote—"Aujourd'hui, en plusieurs pays, la charette conduit les bœufs : c'est à dire les maçons, en plusieurs lieux, gouvernent et enseignent les maîtres."

These are points, Sir, which I venture to think are worthy of more than a superficial consideration, especially at the present time, when the youth of the profession constitute an array of artistic talent and manipulative excellence never before witnessed in this country. I am convinced that if architecture is to hold the place it ought to hold in the next century, when undoubtedly Great Britain will assume an ascendancy in the minor arts, architects must aspire to be something better and more intellectual than mere artists or handicraftsmen, and the press can do untold service by continuing to treat of the vast and complicated question of how they should be taught and formed. The sooner students of any worth find out the truth in this respect—and existing facts speak volumes—the better it will be for themselves, for the future of the profession, and for that backward British public who, I readily admit, are not yet prepared to shoot architecture into the region of practical politics-à-la-mode.

I am, Sir, your obedient servant,  
WILLIAM H. WHITE.

8B Oxford and Cambridge Mansions, N.W. :  
October 5, 1884.

### ART SCHOOLS.

**Canterbury.**—The School of Art, founded by Mr. T. Sidney Cooper, R.A., and presented by him to his native city, was reopened on Monday. Mr. Cooper, in declaring the school open, said he purchased the site on which the gallery was erected for the purpose of instructing a few poor boys in the art of drawing and painting. His infant gallery soon began to grow, and after extending the premises he found it impossible for him to devote sufficient time and attention to the increasing number of pupils. He, therefore, determined to give expression to an intention he had long formed, and present the gallery to the city. He mentioned that three of the boys whom he taught at the gallery were now in permanent and remunerative employment in the exercise of art in London, and added that he should continue to give gratuitous instruction at the evening lessons for the artisan classes, his main purpose being to enable poor boys having talent in them to rise to fame and honour in the art world.

### CHURCH BUILDING AND RESTORATION.

**Brighton.**—The foundation and memorial-stones of a Wesleyan church at the bottom of Dorset Gardens have been laid. The building is being erected from the designs of Mr. C. O. Ellison, of Liverpool, under the direction of Mr. Arthur Loader, architect, Brighton. Mr. W. Taylor, of Brighton, is the builder. Messrs. Monk, Newall & Bryan, of Ruabon, supply the terra-cotta used in the construction.

**Exeter.**—Holy Trinity church has been reopened after improvements carried out under the direction of Mr. Ashworth, architect, Exeter. The works have been carried out by Mr. Stile; the painting and colouring by Messrs. Kingwell, and also the ornamental glazing; the gas lighting has been improved by Messrs. Toby & Bowden—all of Exeter.

**Northleach.**—The church of Northleach on the Cotswolds has been reopened after restoration under the direction of Mr. Brooks, architect, London. The works have been carried out by Mr. Groves, contractor.

**Stock Gaylard.**—The foundation-stone of a new church, to be erected on the site of the old structure which has just been taken down, has been laid. The building is designed in the style of the Decorated period. The architect is Mr. W. J. Fletcher, of Wimborne, and the builder Mr. E. W. Kingman, of Lydlinch.

**Whitwell Church.**—The following statement on the proposed restoration of the parish church, Whitwell, Derbyshire, has been issued:—Whitwell parish church (dedicated to St. Lawrence) is an unusually fine Norman building, and dates from the twelfth century. There is an interesting Norman doorway on the west, and a grotesque corbel table at the north and south. The interior contains massive Norman pillars and a grand chancel arch. It was altered and enlarged in the fourteenth century, and in the sixteenth the old high-pitched roofs were lowered to the present elevation. The church is connected with the families of Frecheville, Meynell, Pipe, Wentworth, Manners, and others, whose armorial bearings still decorate the interior. In the year 1592, the property passed into the hands of Sir John Manners, ancestor of the Dukes of Rutland. In the north transept there is a rich

alabaster monument (much decayed) to "the noble, learned, and religious knight," Sir Roger Manners (1632). The property now belongs to the Duke of Portland, who is the present patron. This fine old church is gradually falling into a sad state of decay. The restoration is a work of pressing necessity. There are cracks in the tower and chancel arch. The keystone of the east window in the chancel is only kept from falling by a beam. The lead covering of the roofs is very defective. The wet penetrates both roofs and walls. The accumulation of earth outside and the imperfect drainage render the interior of the church so damp as to be injurious to health and to damage the organ and other furniture. The brick walling at back of tomb (Sir R. Manners') is unsound; the water goes through it. The stone dressings of the windows and other features outside are in very many places much decayed. The lead-work is rotten. The glass is almost falling to pieces, and cannot be kept in repair. The church has suffered much from the ill-judged alterations of successive generations. The whole floor is much above the original level, entirely concealing the base of the pillars and destroying their proportions. The seats are raised still higher on platforms. The pews conceal the worshippers and render kneeling very difficult. The roofs of the chancel and transepts quite destroy the effect of these features, which in this church would otherwise be remarkably fine. The western arch between the nave and tower is blocked up, and a heavy gallery, which makes hearing very difficult for those seated beneath it, is erected in front. These and many other defects render an immediate restoration imperative. The estimated cost (including oak seats, organ-chamber, heating-vault, and heating apparatus) is 3,100*l*. On September 10, 1883, Mr. J. L. Pearson, R.A., was chosen as architect. His name affords a sufficient guarantee that the restoration will be undertaken in a carefully reverent and conservative spirit.

### GENERAL.

**Mr. Wm. Kenrick** has presented to the Birmingham Art Gallery the picture by William Geets, *A Martyr of the Sixteenth Century*. It was exhibited this year in the Royal Academy. Mr. Henry Moore's *Summer Time off Cornwall* has also been presented to the gallery.

**The Memorial of the Landing of St. Augustine** left the studio of Mr. Roddis, at Birmingham, last week, and is now in course of erection and completion on Lord Granville's estate near Pegwell Bay, in the Isle of Thanet.

**A Part of the Old City Moat at Hereford** has been discovered during the progress of the excavations for the foundations of some new offices now being erected under the superintendence of Messrs. Willett & Wakeling, architects. It ran parallel to the old city walls, and was V-shaped on the inner side, and is at this point some 15 feet deep.

**The Pier** constructed by the Board of Works at Clarecastle, Port of Ennis, from which it is two miles distant, has within the last few days given signs of collapse, and is now in such an unsafe condition that no vessels can pass under it. The pier cost over 5,000*l*.

**Her Majesty the Queen** has presented, without any solicitation, a copy of her last book to Messrs. Chubb & Son's Workmen's Library, with an autograph affixed on the title-page.

**The Great Eastern Railway Company** have just opened the new Brimsdown Station on the Cambridge line, midway between Ponder's End and Ordnance Factory. The district, though comparatively unknown, is attractive, and there are some good residential properties in the immediate vicinity.

**Messrs. J. L. Bacon & Co.** have obtained the contracts for heating St. Michael's Mission Room, Camberwell, and the Congregational Church, Upton.

**The Edinburgh Town Council** intend to apply to Parliament during the ensuing session for powers authorising the construction of a sewer for the conveyance of the sewage of the southern part of Edinburgh into the sea at Portobello, and so doing away with the pollution of the Pow Burn. The scheme, which was some time since sanctioned by the Town Council, is expected to cost about 25,000*l*.

**A "Blackman Air Propeller,"** 48 inches diameter, is used for exhausting the vitiated air from the new Council Chamber at the Guildhall.

**Messrs. Robert Boyle & Son**, Ventilating, Sanitary, and Consulting Engineers, 64 Holborn Viaduct, and Glasgow, have been awarded at the Art and Sanitary Exhibition, Eastbourne, the first prize medal (silver) for their systems of ventilation, sanitation, and heating, and their patent self-acting air-pump ventilators, being the only award given for ventilating or sanitary appliances.

**Messrs. Archibald Smith & Stevens**, of Queen's Road, Battersea, have in course of construction for the Mont Doré Sanatorium, Bournemouth, two hydraulic passenger lifts, upon Stevens & Major's patent suspended principle. They are also erecting in connection with these lifts a complete set of high-pressure pumping machinery.





"INK-PHOTO," SPRAGUE & CO., LONDON.



The Architect, Oct. 11<sup>th</sup> 1884.



"NK PHOTO" SPRAGUE & CO. LONDON

DESIGN FOR ADMIRALTY & WAR OFFICES  
[ PARK FRONT. ]  
BY MR THOMAS PORTER, ARCHITECT.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, OCTOBER 11, 1884.

### TENDERS, ETC.

**\*\* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.**

**\*\* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—“Contract Supplement to THE ARCHITECT.”**

### EDITORIAL NOTICES.

**The authors of signed articles and papers read in public must necessarily be held responsible for their contents.**

**No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.**

**Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.**

### ADVERTISEMENT SCALE.

For Two Lines and under	£0 2 6
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For Half Page	4 10 0
For a Page	8 8 0

**On pages preceding and following matter, special rates.**

**Public Companies' Advertisements, 12l. 12s. per page; 1s. per line.**

### COMPETITIONS OPEN.

**BOMBAY.**—Nov. 6.—The Municipal Commissioner of Bombay invites Designs and Estimates for a New Municipal Hall and Offices, which must be sent to his Office by Twelve noon, on Nov. 6. A Premium of 5,000 rs. will be given for the Design most approved of by the Commissioner, with the assistance of a Committee of the Corporation; 3,000 rs. for the second, and 2,000 rs. for the third. The total cost of the buildings is not to exceed 5 lacs (5,00,000 rs.). Mr. E. C. K. Ollivant, Municipal Commissioner's Office, Bombay, or at Messrs. E. W. & R. Oliver, 1 Corbet Court, Gracechurch Street, London.

**EGHAM.**—Oct. 11.—Designs are invited for the Erection of a School to accommodate 320 Children. Mr. Benjamin Tice, Clerk to the School Board, Irene Villa, Egham.

**SOOTHILL.**—Nov. 6.—Plans are Required for a Board School proposed to be Erected in Gregory Street. Mr. J. D. Good, Market Place, Dewsbury.

### CONTRACTS OPEN.

**ABERDUR.**—Oct. 11.—For Building Dwelling-house on Farm of Sauchentree. Mr. J. D. Sharp, Bank Agent, Rosehearty.

**ACCRINGTON.**—For Boundary Walls, Seating, and Heating Apparatus of Church of St. John. Mr. Henry Ross, Architect, Birch Street, Accrington.

**ASHBURTON.**—Oct. 11.—For Building Coach-house, Stables, and other Buildings. Mr. G. E. Allen, Southern House, North Haish, Ivybridge.

**BARRY ISLAND.**—Oct. 14.—For Construction of Dock and Railway (seven miles). Messrs. J. W. Barry & H. M. Brunel, 23 Delahay Street, Westminster.

**BASINGSTOKE.**—Oct. 14.—For Alterations to Lesser Market. Mr. H. Budden, Borough Surveyor, Town Hall, Basingstoke.

**BATLEY.**—Oct. 11.—For Building House, Talbot Street. Mr. G. Hey, 10 Albert Terrace, Albert Street, Batley.

**BELFAST.**—Oct. 11.—For Work in Wards at Royal Hospital. Mr. Watt, Architect, 77A Victoria Street, Belfast.

**BELFAST.**—Oct. 14.—For Building Two Dwelling-houses. Messrs. Young & Mackenzie, Architects, 7 Donegal Square East, Belfast.

**BINGLEY.**—Oct. 11.—For Building Ten Houses and Two Shops, Church Street. Messrs. J. & J. Clark, Stone Merchants, Bingley.

**BIRMINGHAM.**—Oct. 14.—For Cooking Apparatus for New Kitchen at the Workhouse. Mr. W. H. Ward, Architect, Paradise Street, Birmingham.

**BOLTON.**—For Laying Pipe Sewers (75) yards, &c. Mr. T. E. Smith, Wood Street, Bolton.

**BOMBAY.**—Nov. 14.—For Masonry and Excavation of Wet Dock (25 acres area), to include Wharf Walls (7,750 feet), Sea Entrance, &c. Mr. J. A. McConnochie, C.E., Engineer's Office, Surrey Commercial Docks, Rotherhithe.

**BRADFORD.**—Oct. 13.—For Building Railway Goods Offices. The Engineer, Hunt's Bank, Manchester.

**BROUGHTON-IN-FURNESS.**—Oct. 14.—For Additions to Dwelling-house for a Police Station. Mr. J. W. Grundy, Architect, Brogden Street, Ulverston.

**BURNLEY.**—Oct. 21.—For Building Mortuary, Town's Yard, and Boundary Walls, East Side of Parish Churchyard. Mr. J. Cartwright, Borough Surveyor, Burnley.

**BURNLEY.**—For Building Workshops, Burton Street. Mr. T. Bell, Architect, 14 Grimsshaw Street, Burnley.

**CARDIFF.**—Oct. 15.—For Repairing, Painting, and Renovating Portions of Town Hall. The Borough Engineer, Town Hall, Cardiff.

**CARDIFF.**—Oct. 24.—For Construction of Filters and Service Reservoirs, Boundary Wall, &c., Heath. Mr. J. A. B. Williams, C.E., Queen's Chambers, Cardiff.

**CROYDON.**—Oct. 16.—For Construction of Surface Water Drains (1,400 yards), South End District. The Borough Engineer, 8 Katherine Street, Croydon.

**CULLINGWORTH.**—Oct. 18.—For Building Shed at Eller Carr. Mr. J. B. Bailey, Architect, North Street, Keighley.

**DERBY.**—For Execution of Street Works, Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**DUBLIN.**—Oct. 15.—For Main Sewer, Cabra Road. Mr. P. F. Lennard, C.E., 35 Lower Ormond Quay, Dublin.

**DUNDALK.**—Oct. 25.—For Construction of Works of Water Supply. Messrs. Hassard & Tyrrell, C.E., Westminster Chambers, Westminster.

**EASTCHAP.**—Oct. 21.—For Construction of Sewers, Gullies, &c. Colonel Haywood, Engineer to the Commissioners of Sewers, Guildhall, E.C.

**GARFORTH.**—For Alterations and Additions to Shop. Mr. C. D. Swale, Architect, 28 Albion Street, Leeds.

AWARDED SEVEN PRIZES FOR SUPERIORITY, INCLUDING PARIS GRAND MEDAL, 1878, THE CERTIFICATE OF MERIT OF THE SANITARY INSTITUTION OF GREAT BRITAIN, AND THE AWARD OF MERIT AT THE INTERNATIONAL EXHIBITION, 1881.

**TO ARCHITECTS.—THE BRICK of the FUTURE, that shall not get dingy or sooty like other Bricks, but, being of a Semi-Vitreous nature, will maintain a clean and washable surface.**

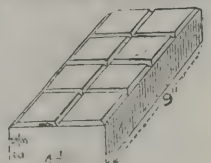
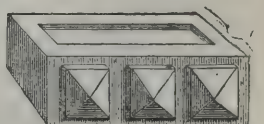
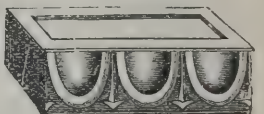
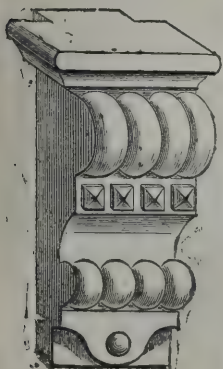
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Made from the Finest Terra-cotta and Stoneware Clays, of a warm and pleasing appearance, of beautiful and superior quality and finish, non-absorbent, acid, fire, and alkali proof, will resist the most severe frosts, and when tested were found to withstand a pressure of 445 tons to the square foot. They have been used in the most exposed parts on the North and South Coasts, and being true Terra-cotta, are warranted imperishable.

Pattern Sheets and Price Lists of superior Glazed Stoneware Sanitary Pipes, and Fire Clay Goods, Chimney Tops, &c., on application.

Sole Manufacturers:—CANDY & CO., Limited, GREAT WESTERN POTTERIES, NEWTON ABBOT, AND 11 QUEEN VICTORIA STREET, LONDON, E.C.

Who are also Sole Makers of the celebrated "Granite Vitrified" Paving Bricks for Yards, Stables, and Footpaths, and "Granite Vitrified" Damp-proof Building Bricks, as used by H.M. Government for dock construction, &c. Samples free to Architects and Engineers.





GLASGOW.—Oct. 11.—For Carpenter's Shop and Smithy, at Belvidere, London Road. Mr. John Carrick, Master of Works, 74 Hutcheson Street, Glasgow.

GLASGOW.—For Construction of Iron Shed. Messrs. John Milligan & Co., 17 Oswald Street, Glasgow.

GRANGEMOUTH.—For Constructing Coffin Dam at Dry Dock. Mr. A. Brown, Kerse Estate Office, Falkirk.

GREAT HARWOOD.—Oct. 16.—For Building Sunday and Day-schools. Messrs. Maxwell, Tuke & Hurst, Architects, 175 Lord Street, Southport.

GREENOCK.—Oct. 15.—For Mason, Wright, and Iron-work, of Longwell Close Buildings (Section No. 1). Mr. C. McCulloch, Town Clerk.

HASTINGS.—Oct. 16.—For Construction of Brick Sewer and Pipe Drain, Primrose Vale. Messrs. Jeffery & Skiller, Surveyors, 5 Havelock Road, Hastings.

IRVINE.—Oct. 15.—For Laying Cast-Iron Pipes, &c., from Dykehead Reservoir to Muirside. Messrs. Leslie & Reid, C.E., 72A George Street, Edinburgh.

ISLE OF WIGHT.—Oct. 15.—For Construction of Sea Wall, &c., near Sandown Fort. Mr. Edwin Humphreys, General Surveyor of Highways, Newchurch.

LEEDS.—Oct. 11.—For Building Five Houses and Shop, Rosebank Road. Mr. J. Charles, Architect, 14 Butts Court, Leeds.

LEICESTER.—Oct. 23.—For Construction of Main and Storm Overflow Sewers, Dame Hill District, and Brick Sewers (1,319 yards and 269 yards) with Manholes, Ventilating Shafts, Bellmouth Junctions, Flushing Chambers, &c. Mr. J. Gordon, C.E., Borough Surveyor, Leicester.

LINCOLN.—Oct. 25.—For Sluice at Wainfleet Haven, with Outfall Cut, Enlargement of Bridges, &c., and Forming New Cut, Skegness. Mr. S. E. Williams, C.E., Bridge Street, Boston.

LONG LAWFORD.—Oct. 15.—For Building Branch Co-operative Store and Storekeeper's House. The Manager, Co-operative Society, Rugby.

LYME REGIS.—Oct. 25.—For Reseating Parish Church, Building Vestry, &c. Mr. R. W. Hillman, Solicitor, Lyme Regis.

MANNINGHAM.—Oct. 14.—For Building Riding School. Messrs. Fairbank & Wall, Architects, 155 Swan Arcade, Bradford.

MIDLETON.—For Repairing Roof of Church, &c. Messrs. H. & A. Hill, Architects, 2 George's Street, Cork.

MORPETH.—For Building Block of Three Dwelling Houses. Messrs. T. & R. Nicholson, Bridge Street, Morpeth.

NEATH.—Oct. 29.—For Construction of Reservoir, Laying Water Mains, &c. Mr. W. E. Thomas, Surveyor, 58 Water Street, Neath.

NEWPORT, MON.—Oct. 16.—For Reconstruction of Drainage at Barracks. The Royal Engineer Office, 108 Cowbridge Road, Canton, Cardiff.

NEWTON-LE-WILLOWS.—Oct. 20.—For Laying Pipe Sewers (1,400 yards). Mr. Richard Brierley, Surveyor, Newton-le-Willows.

NEW ROSS.—Oct. 29.—For Construction of Iron Viaduct with Swing Bridge over the River Barrow. Drawings, &c., at the Engineer's Office, Bray, co. Wicklow.

NOTTINGHAM.—Oct. 15.—For Building Dwarf Walls and Steps on the Forest, &c. Mr. Brown, Borough Engineer, Nottingham.

NOTTINGHAM.—Oct. 25.—For Building Five Shops, Gedling Street. Mr. Brown, Borough Engineer, Municipal Offices, Nottingham.

NOTTINGHAM.—For Pulling Down and Rebuilding Old, Royal Oak Inn and Building Stabling. Mr. Arthur W. Brewill, Architect, Exchange Chambers, Greyhound Street, Nottingham.

NOTTINGHAM.—For Building Bank Premises. Messrs. Evans & Jolley, Architects, Eldon Chambers, Nottingham.

OLD DOLPHIN.—Oct. 14.—For Building Two Houses. Mr. Herbert Hodgson, Architect, 68 High Street, Queensbury.

OLA, Co. LIMERICK.—Oct. 22.—For Building Constabulary Barrack. Mr. W. B. Soady, Offices of Public Works, Dublin.

OPORTO.—Dec. 15.—For Construction of Covered Market. Senor J. A. Correa de Barros, President of the Municipal Board of Oporto, Portugal.

PADDINGTON.—Oct. 15.—For Alterations and Additions, to Mortuary Buildings. Messrs. Higgs & Rudkin, Architects, 44 Bedford Row, W.C.

PADDOCK.—Oct. 13.—For Building Nine Houses and Outbuildings. Mr. William Ellis, Architect, Market Chambers, Market Place, Heckmondwike.

PORTUMNA.—Oct. 18.—For Proposed Changes at Workhouse Buildings. Mr. Kempster, County Surveyor, Balinasloe.

ROWDITCH.—Oct. 20.—For Construction of Roads. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

SHARNFORD.—Oct. 16.—For Removal of Footbridge and Erection of New Bridge. Mr. Johnson, District Surveyor, Bitteswell, Lutterworth.

SOUTHOWRAM.—Oct. 20.—For Erection of Barn and Mital at Town Gate. Mr. Edwin Taylor, Architect, Hipperholme.

STRATFORD-ON-AVON.—For Alterations to Dwelling-house and Premises. Mr. T. T. Allen, Architect, Broad Street, Stratford-on-Avon.

SWANSEA.—Oct. 18.—For Building Public Library, Art Gallery, Science and Art Schools. Mr. Henry Holtom, Architect, Bond Street, Dewsbury.

TOWNSTAL.—Oct. 16.—For Heating Apparatus and Sundry Works at Church. Mr. Ashford, Churchwarden, Coombe, Dartmouth.

TREDEGAR.—Oct. 11.—For Building Villa Residence. Mr. C. Taylor, Architect, 22 Duke Street, Cardiff.

TRURO.—Oct. 18.—For Building Post Office. Mr. Silvanus Treval, Architect, Truro.

VICTORIA DOCKS, E.—Oct. 18.—For Building Sub-District Post Office. Mr. A. B. Mitford, Secretary, H.M. Office of Works, 12 Whitehall Place, S.W.

WAKEFIELD.—Oct. 20.—For Laying Stoneware Tubes (two miles), &c., to Farm Conduit. Mr. E. Filliter, C.E., 16 East Parade, Leeds.

WATFORD.—Oct. 14.—For Building Post Office. H.M. Office of Works, 12 Whitehall Place, S.W.

WEST HAM.—Oct. 14.—For Construction of Timber Piled Wall, Channelsea River, Abbey Mills. Mr. Lewis Angell, C.E., Engineer's Department, Town Hall, Stratford, E.

WOODLAND.—Oct. 11.—For Erection of Coachhouse, Stables, and other Buildings, &c. Mr. G. E. Allen, South-east House, North Huise, Ivybridge.

YORK.—For Building Six Dwelling-houses, Brunswick Place. Messrs. Fisher & Hepper, Architects, 16 Castle-gate, York.

## TENDERS.

### ALVESTON.

For Erection of New Church, including Tower, Alveston, near Bristol. Mr. HENRY LLOYD, Architect, Bristol. Quantities supplied.

STEPHENS & BASTOW, Bristol and London (accepted) . . . . . £3,176 0 0

### ASTON.

For Steam and Hot-water Pipes for Infirmary Wards, Aston.

E. & N. Mitton, Birmingham . . . . . £149 10 0  
Crichley, Weston & Co., Birmingham . . . . . 148 10 0  
Larmuth & Co., Salford . . . . . 142 5 0  
ROBINSON, Birmingham (accepted) . . . . . 100 18 6  
Parker, Birmingham . . . . . 98 16 0

### BRADFORD.

For Building Mill, Garnett Street, Bradford. Mr. G. C. GAMBLE, Architect.

*Accepted Tenders.*  
Bairstow, Shipley, mason . . . . . £300 0 0  
Hutchinson, Bradford, joiner . . . . . 90 0 0  
Hill & Nelson, Bradford, slater . . . . . 73 0 0  
Hodgson & Son, Bradford, plumber . . . . . 51 10 0  
Hargreaves, Bradford, plasterer . . . . . 13 10 0  
Arundel, Bradford, painter . . . . . 8 10 0

### CAMERON BRIDGE.

For Building Double Cottage at Cameron Bridge, Windygates, for Mr. H. V. Haig. Mr. JOHN HOUSTON, Architect, Dunfermline. Quantities by the Architect.

*Mason and Brickwork.*  
Wikie & Gibb, Leven . . . . . £289 0 0  
STREET & SONS, Dunfermline (accepted) . . . . . 269 14 0

*Joiner Work.*  
Birrell, Leven . . . . . 212 0 0  
WILSON, Anstruther (accepted) . . . . . 204 0 0

*Slater and Plasterer.*  
Knox, Leven . . . . . 91 6 11  
J. & A. WILLIAMSON, Kennoway (accepted) . . . . . 78 14 0

*Plumber.*  
Whyte, Dunfermline . . . . . 31 5 0  
WALKER, Leven (accepted) . . . . . 30 19 0

### COCKERMOUTH.

For Alterations at Globe Hotel, Cockermouth. Mr. R. S. MARSH, Surveyor. Quantities not supplied.

Borrowdale, Cockermouth (including cement floor) . . . . . £2,296 0 0  
Gray, Mann & Co., Workington . . . . . 2,093 0 0  
Crow & Co., Cockermouth (exclusive of cementing) . . . . . 2,071 10 0  
ARMSTRONG, Cockermouth (accepted) . . . . . 1,613 0 0

### DARTMOUTH.

For Alterations and Repairs to Higher Mount Galpin, Dartmouth, for Mr. W. H. Hawke. Mr. E. H. BACK, Architect. Quantities by the Architect.

Henley . . . . . £137 10 0  
Vesale . . . . . 137 10 0  
Valsey & Son . . . . . 135 0 0  
WILLIAMS (accepted) . . . . . 127 0 0

### DURHAM.

For Erecting Bakehouse and Two Men's Baths and Lavatories at the Workhouse, Durham.

Ainsley . . . . . £180 0 0  
Pratt . . . . . 171 13 0  
Gibson . . . . . 165 11 6  
Walton . . . . . 165 5 0  
Wardropper . . . . . 163 10 0  
Mowbray . . . . . 169 0 0  
Laidler . . . . . 168 13 6  
Punshen . . . . . 155 10 0  
Talbot . . . . . 151 3 6

### EASTBOURNE.

For the Carcase of Detached House, St. John's Road Eastbourne. Messrs. WILLIAM REDDALL & SON, Architects and Surveyors, 10 South Street, Finsbury, and 86 Terminus Road, Eastbourne.

Highest tender . . . . . £1,800 0 0  
Lowest (DORR & SON, accepted) . . . . . 1,428 0 0

### EBBW VALE.

For Works in connection with the Water Supply to Beaufort, Ebbw Vale. Mr. T. J. THOMAS, Surveyor.

*Cast-iron Pipes.*  
Jordan & Sons, Newport, Mon. . . . . £767 0 0  
*Pipe Laying, Fittings, &c.*  
Mackay, Hereford . . . . . £1,001 3 5

For Works in connection with Waelnwyd Water Supply, Ebbw Vale.

*Cast-iron Pipes.*  
Isca Foundry Co., Newport, Mon. . . . . £282 0 0  
*Pipe Laying, &c.*  
Mackay . . . . . £633 5 6

For Surface Drainage at Cwm and Steel Works, Ebbw Vale.  
Jones & Son, Newport, Mon. . . . . £221 0 0

### HAYLE.

For Rebuilding Railway Viaducts at Redruth and Guildford, Hayle.

STEVENS, Ashburton (accepted)

### LONDON.

For Rebuilding of Superstructure and Strengthening of Hammersmith Bridge, also for Construction of a Temporary Bridge. Sir J. W. BAZALGETTE, Engineer.

Mowlem & Co. . . . . £25,300 0 0  
Webster . . . . . 94,828 0 0  
Moss . . . . . 91,019 5 0  
Chester . . . . . 89,000 0 0  
Vernon & Co. . . . . 88,783 0 0  
DIXON, APPLEBY & THORN (accepted) . . . . . 82,177 0 0

For Erection of New Tank at Bermondsey Workhouse.

Frazer Bros., galvanised iron . . . . . £76 10 0  
Cracknell . . . . . 55 0 0  
Bayman & Son . . . . . 49 10 0  
Smith & Barnes, wood, lined with lead . . . . . 45 0 0  
BULLERS (accepted) . . . . . 35 0 0

For New Sculpture Studios in Vincent Square, Westminster, for Messrs. J. Whitehead & Sons. Mr. JOHN ADAMS, Architect.

Beazley, Westminster . . . . . £285 0 0  
Brunsen, Brentford . . . . . 625 0 0  
Carman, Richmond . . . . . 547 0 0  
Richards, Westminster . . . . . 536 0 0  
Garratt, Brixton . . . . . 555 0 0  
KELL & SMITH, Chelsea (accepted) . . . . . 510 0 0

For Roads and Sewers on the Ferme Park Estate, Hornsey. Messrs. E. E. CROUCHER & Co., Surveyors, 76 Chancery Lane.

Nowell & Robson . . . . . £6,029 0 0  
Dunmore . . . . . 4,993 0 11  
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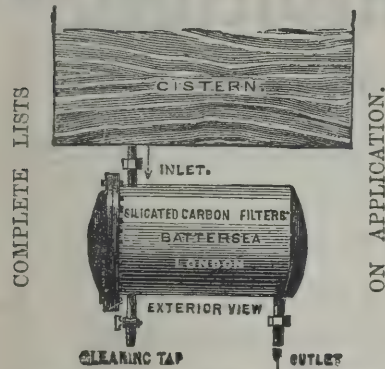
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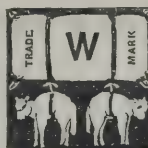
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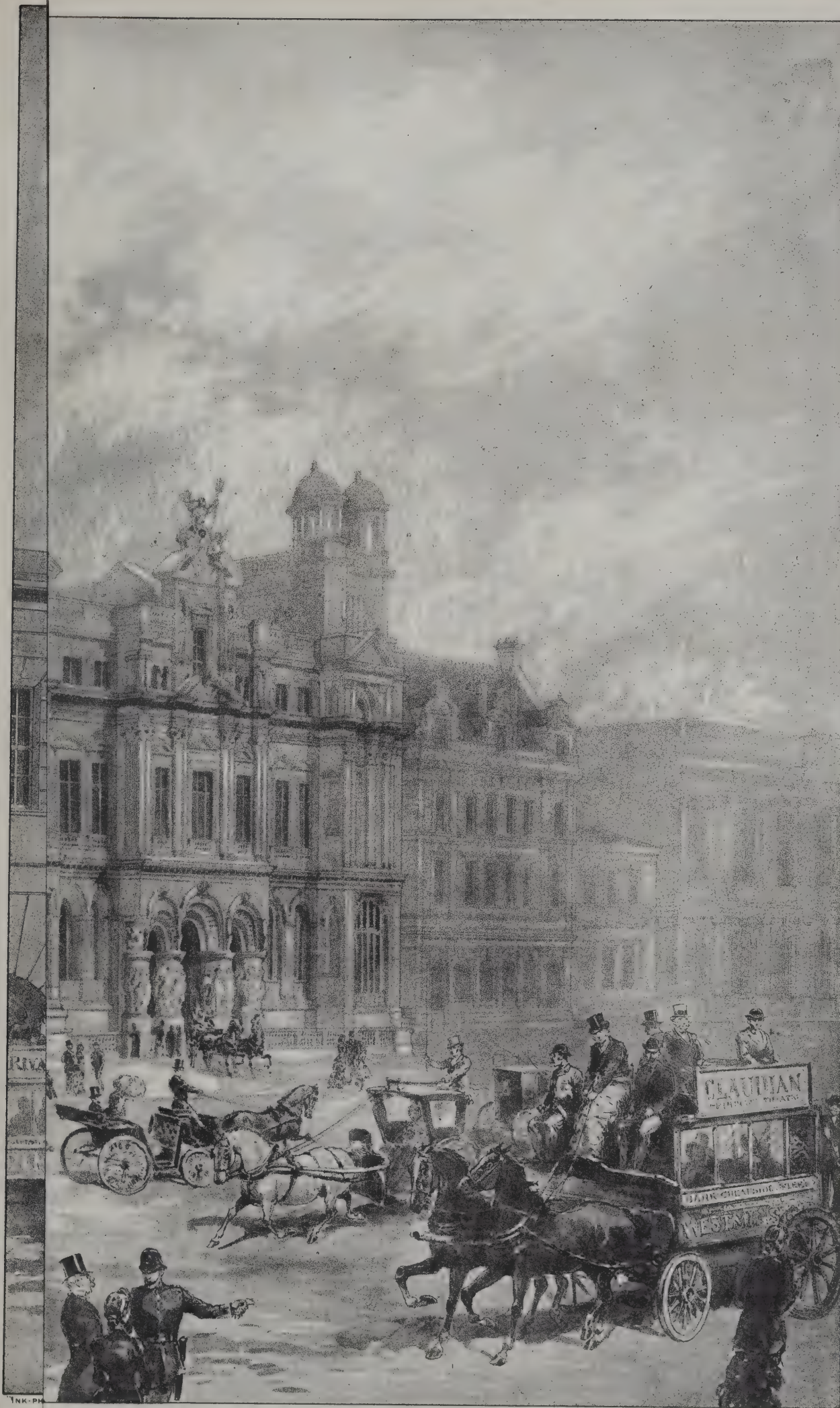
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# The Architect.

## A CHAPTER OF PRACTICAL CRITICISM CONTINUED: THE WAR OFFICE AND ADMIRALTY.



THE whole of the nine designs which engaged in the final competition for the new War Office and Admiralty having now been placed before our readers, we may appropriately offer a few further remarks of a critical character upon a comparison of their principles of artistic composition. On the former occasion\* we confined ourselves to the design of Messrs. LEEMING, using that of Messrs. STARK & LINDSAY for occasional purposes of contrast; we now take leave to introduce also those of Messrs. VERITY & HUNT, Messrs. WEBB & BELL, and Messrs. MAXWELL & TUKE; still dealing with the perspective views as to be seen from St. James's Park.†

It ought to be borne in mind, no doubt, if we take the highest ground in the criticism of any exterior design, that the basis of composition ought to be the plan. It is one of the boasted merits of the Gothic method that this rule need never be violated in any case, however complex, in which the designer rightly follows its principles; mere symmetry need not be made use of at all, and, when it is, it will be as the servant, not the master, of the architect's will. It is still more the opprobrium of the modern Classic method that the rule is almost universally disregarded, symmetry being the master and not the servant, and the style being in practice undeniably the slave of a certain arbitrary system of superficial uniformity at any price, which sets at defiance the relations of exterior and interior throughout the whole process of design. The exterior, in other words, ought to be the honest and natural skin or surface of the interior; in good Gothic it is so; and in Classic it is not.

Now it ought never to be overlooked that it is not the features of the Classic style in detail that necessarily offend in this way against the rule of fitness; it is mere academicalism in the treatment of masses—an element which may be dispensed with, and in some cases has been. Not, perhaps, in the case of a great municipal building, but often in such an example as a rural villa, it has been the pride of the Classic architect to reject such symmetry ostentatiously, and even to carry irregularity and picturesqueness to the full extent of the interior requirements, if not a little farther. Therefore in such a problem as the one before us, under different circumstances, it would be perfectly possible, and (so to speak) sufficiently easy, for any architect who is master of piquant design as well as of Classic detail to set out his plan strictly on the Gothic or irregular method, and to let the outside follow the inside as it best could, setting all symmetry at naught. The result, be it clearly understood, might still be of the Classic style, although entirely free from what we may call the Palladian spirit. It would be free Classic.

In the present case, no doubt, there is a special reason why this kind of freedom is not to be hoped for; indeed, we may say, looking at the necessary uniformity of character in the whole scheme of interior organisation, it is not asked for. But at any rate the critic is still entitled to inquire whether the general massing of the exterior does or does not correspond with the general massing of the plan. If it does not correspond, then the composition of the exterior is founded more or less upon falsification; for the outside is not true to the inside even in its broadest facts. Regarded in this way Messrs. LEEMING's design is not as it ought to be; for the observer of the Park front would certainly never suppose that the transverse range of building which forms the south flank towards the Horse Guards is repeated, not at the northern end, but in a position entirely at haphazard about two-thirds down the line. In the design of Messrs. WEBB & BELL the arrangement is in this respect both better and worse—and, by the way, extremely

cleverly manipulated; there is symmetry towards the Park, and symmetry towards the interior court at the back, but the two symmetries have different axial or centre-lines, disagreeing only by a few feet in a most unusual way. (The block plan of this design is as fine an academical study of the ambitious order as one could wish to see.) Then the correspondence without and within in Messrs. MAXWELL & TUKE's block plan seems to be absolutely perfect—a most admirable success in the utmost simplicity of motive. Messrs. VERITY & HUNT's symmetries are also highly successful so far, the exterior reading being true to the interior; and of Messrs. STARK & LINDSAY's design very much the same may be said. The proposition we submit, thus so amply illustrated, is no less than this—that the reading of the exterior composition, even by the comparatively inexperienced eye, ought to carry with it a correct idea of the block plan behind; and, indeed, that the disregard of this rule of correspondence is one of the essential points in which the Gothic method claims the pre-eminence of truth over the make-believe of Neo-Classic.

Following out the same principles of criticism, and applying it now to the leading features of the wall composition, we may observe in Messrs. MAXWELL & TUKE's design how well the noble corner pavilions stand on the plan. In Messrs. STARK & LINDSAY's the flanking towers, although not telling so plain a story, are scarcely to be objected to; but the increased height of the central mass of the principal façade, although highly effective, is not well accounted for on the plan, and the reflection of this on the flank wall is still less so. Then on Messrs. WEBB & BELL's composition, which aims at the picturesque more emphatically than any of the others, the great corner pavilions, taken each as a whole, are in reality in the shape of an L on plan, while the middle pavilion, in a way which is particularly characteristic of modern work both Classic and Gothic, has no back wall at all, and scarcely any side walls; indeed the same may be said of the corner pavilions. In Messrs. LEEMING's design the corner campanili are no doubt accounted for on the plan, albeit only as regards their construction; but the only evidence which is offered by the interior as regards the intermediate pavilion-like projections with their turrets and lofty roofs must be taken to be that the things are absolutely nothings, their value being of course just the same on the flank wall. Lastly, the design of Messrs. VERITY & HUNT is in this respect the most complete superficialisation from end to end; the elevation and the plan having no critical accordance whatsoever as regards motive, and the effect of the whole mass of building being in reality that of a solid block, with the outer walls "broken up" in the way they are, on the same principle as in the treatment of Newgate Prison and the Bank of England, for the sake of breaking them up, and nothing else. Here again we submit the rule without compromise that, in Classic composition of high class, every feature of the exterior ought to tell a tale of the disposition of the interior. It would be too much to say that, as in Gothic work of the perfectly unrestrained type, every nook and cranny and closet inside should thrust itself into view outside brusquely and often awkwardly, but the alternative in Classic treatment is simply to dispose along the stately façades the stately rooms only, in the utmost regularity possible, and to place all the irregularity and awkwardness out of sight, or on inner façades, where they can be grouped in a way of their own with their own effect. Roofs, also, pavilions, wings, towers, and so on, ought always to tell a tale of truth and not falsity; and symmetry without ought to accord with a symmetry within, which is the same symmetry and not another.

Many of our readers may think this sort of criticism, however dignified, is oppressive, a burden greater than mere humanity can bear; for, although Nature, it is true, asks for no consideration, the mortal architect must be allowed to err. To this we can only answer that even if the perfection of the ideal may be beyond attainment in fact, still it need not be surrendered in fancy; and indeed it is nothing else but the surrender of this perfection in the criticism of modern Classic architecture that has produced the universal sham which so inveterately characterises the method in practice, and which it may be the task of robust English intelligence in another generation to succeed, first in clearly discerning, and then in effectually sweeping away. It cannot be too often repeated that the great merit of the Gothic method is that there need be no sham at all, and that in its best work there is none.

The all-important question of the scale of an architectural

\* See p. 161, September 13.

† For these illustrations, see our issues for August 30 and September 6, 13, and 27.



composition—that is, the correspondence or uniformity of scale which ought to prevail throughout the details—is illustrated by the designs before us. The most common instance of a disregard of this principle is when in standard Cinquecento work there is a range of big columns along a façade supporting the main entablature, with a range of little columns in the inter-spaces supporting the arches of the windows; or, what is almost worse, with the same little columns supporting, over the windows, little pediments—probably angular and curved pediments alternately, as if to show how completely independent of minor considerations of severity the modern architect can be. But, if the rule of scale is to be put in force at all, it must go much farther than the avoidance of such a practice as this. It may be laid down to signify that all features whatever ought primarily to wear an appearance of equal weight in the composition, that is to say, equal heaviness or equal lightness. Emphasis may of course be given to one part or another notwithstanding this; and artistic grouping may produce any amount of incidental vigour, local force, or power. But when these effects are accomplished only by augmenting the heaviness or massiveness of the building—generally the actual size of the stones, or what that size ought to be—then there is a want of scale. In Messrs. STARK & LINDSAY'S work the rule of scale seems to be generally well observed; barring the tiny columns at the windows; but whether it is right to increase the scale at the summit of the towers is a fair question. In Messrs. MAXWELL & TUKE'S the two-storey order in the corner pavilions and the central block is a breach of the rule; and there seems to be a very small-scale order by the windows besides. In Messrs. WEBB & BELL'S the scale is perhaps perfect; the comparatively large arches which are so conspicuous, we may remark, being still small-stone work like the rest, and the supporting columns quite in scale. Messrs. VERITY & HUNT set all scale at defiance; and so do Messrs. LEEMING. In this last design the disparity between the heaviness of the main columns and their basement piers and the lightness of some of the window dressings is very remarkable.

On the whole we regard these designs—although seldom attaining the dignity of the higher Classic—as furnishing to the student, whether young or old, an opportunity that ought not to be undervalued for attempting experiments in artistic criticism which are much needed in the present state of architectural opinion and practice.

## ICELAND.

By J. STARKIE GARDNER, F.G.S.

THE utter disappearance, with the most trifling exceptions, of the dwellings and even public buildings of the Anglo-Saxon period, which must have been one of relatively high civilisation, has been a subject of wonder to moderately well-informed people like myself.

I had the opportunity a short time since of traversing Iceland in many directions. The country is civilised, and has a history in many respects like our own, yet nowhere was the slightest trace of any occupation to be seen. A brief note of the more salient points in its early history will render apparent how closely its civilisation must have resembled our own in Saxon times; and if the styles of building were equally similar, we shall be at no loss to understand why no traces of them remain.

Iceland was colonised in the middle of the tenth century, and so rapidly that HAROLD, in order to check its too rapid growth, imposed a fine of four ounces of silver on all immigrants. A Saxon bishop arrived in the year 981, and in 984 the first church was built. In A.D. 1000 the whole country was converted to Christianity; Benedictines and Augustinians settled, and a tribute was paid to the Roman See. It was not until 1261 that the inhabitants put themselves under the protection of Norway, and there is every reason to believe that prior to that date their civilisation equalled any which obtained among their relatives settled in England. Their manners, customs, and mode of life were probably identical, and of these their Scalds have left an almost uninterrupted record from the golden age of HAROLD, *aux beaux cheveux*, to late historic times. We have, in addition to direct evidence that these have never undergone much change, collateral evidence to show that the habits and customs of the population are

still substantially the same as they were in the tenth and eleventh centuries. The ordinary Iclander has no towns and no centres of reunion; he lives alone, whether priest or peasant, and when he meets his distant neighbours it is by accident. The people, though nominally under Denmark, have never been called on to supply either soldiers or sailors to the Danish services, and until quite lately no one ever thought of wandering outside his native land. There are even now no roads or bridges, and the country consists entirely of narrow valleys, separated by mountains or hills averaging 1,200 to 2,000 feet high, each valley being the bed of a torrent, often difficult and even dangerous to ford. The Norse language, which was carried to Iceland by the colony of noble families who first settled there, was spoken with conservative elegance, free from any mixture of foreign idiom. While, in course of ages, it became modified on the mainland, it was preserved in the interior of Iceland in all its native purity, so that even as early as in the twelfth century the language of the ancient Sagas was spoken of as Icelandic. Under the primitive conditions and habits obtaining in this isolated country it has remained undefiled and pure, indeed there is no priest, or peasant at the present day in Iceland who cannot understand perfectly the language of even the most ancient of the Sagas. The relationship between modern Icelandic and the Saxon element of the English language is still to be traced, for, though marked by wide divergences of spelling, a great number of common words, when slowly pronounced, can be mutually understood, and a glance at the names on a map will indicate the kind of community that exists. Another example of the small amount of change that has taken place in the habits of this people is seen in the collection of native work in the museum at Reykjavik. The wood-carving, and more especially the needlework, would not, from its style, be assigned to a later date than the twelfth century, yet much of it has been executed in, and is actually dated of, the eighteenth century. Patterns originated in the days of HAROLD, and used in the Bayeux tapestry and contemporary works, have been faithfully adhered to, and handed down from generation to generation without the smallest change in style. The costume of an Iclander even now, except at trading stations, is of home-made frieze of an uniform brownish tint. The women display a somewhat greater variety of colour, but all alike wear a peculiar black fez cap and long tassel. They have a gala dress, handed down as heirlooms in families on account of its costliness, the head-dress of which is a small white Phrygian bonnet, the lappel of which is stuffed and stiffened like the crest of a helmet, decorated with silver frontlet and ornaments, from which depends backwards a long lawn or lace veil. This dress must be of extreme antiquity. Other instances of the conservancy of the Iclander might be adduced were it not almost superfluous to do so here, the dwelling-house being the point in view. The probability is great that the Iclander has been as conservative in the plan and build of his dwelling as he has been in his language and his art. Nothing can, in fact, be well imagined that could have modified it, for Iceland remained so isolated until the introduction of steam, that when Sir JOSEPH BANKS, P.R.S., visited it towards the close of last century, money was almost unknown, and traffic was entirely carried on by means of bartering coarse home-spun cloth, dried fish, &c.

The typical Icelandic house, or *baer*, as it is termed, is constructed either entirely of earth or of earth and rough stones in layers, and has a turf roof, made waterproof by a lining of birch bark or straw. It is far, however, from a mere earth cabin, and has an intricate arrangement. Very little wood is used in its construction, as the country is destitute of timber, for it is not only costly but difficult to transport from the seaports in a land where any approach to a wheeled vehicle is unknown, and the baulks or logs have to be dragged over mere tracks at the heels of the sturdy little ponies through whom locomotion is alone possible. The rafters and lintels, however, are of wood, obtained somehow, and the floor of beaten earth. A well-arranged dwelling consists of seven houses side by side, each under its own peat roof, and with walls 4 or 5 feet thick. Those towards the centre are the largest and loftiest, consisting of two floors, with one room to each. These are the dwelling-rooms, and possess but one door in common. The entrance opens on to a dark and low ante-room (*beardyr*), on the left of which is the guest chamber (*gestaskáli*). The inmates usually sleep in lofts under the roofs, reached by ladders, and some-



times situated over the cow-house for warmth. Not infrequently, however, the dwelling-room (*badstofa*) is in rear of the other buildings, and is reached by a long dark passage 50 to 80 feet in length. It is a large and gloomy apartment lighted only by small holes in the side or roof, round which turf bunks are arranged, as in emigrant ships, in which the family and servants of both sexes sleep. The kitchen is a much smaller apartment, some flat stones on the ground serving as a stove, while a hole in the roof, with the sides carried up to promote draught, acts as window and chimney. The kitchen may be on the right of the ante-room or in rear, and there may be two state rooms in front, though this is very rarely the case. The bed in the guest chamber occupies a niche in the wall facing the front window. The low house at one extremity is the cattle shed, and at the other a store-house or smithy. A dairy and store or tool-house complete the row, these latter being windowless, while the guest room is provided with a small glazed window. In the better class of priest's or farmer's house, and every priest is a farmer save on Sunday, one room at least is wainscotted, and it is obvious that wood would be less a luxury if its cost were brought within the means of the builders. With this exception, the Icelandic house described may differ but little from that inhabited in England by the well-to-do Anglo-Saxon farmer up to the Norman invasion. The absence of any stove or fire, except in the kitchen, leads to the exclusion as far as practicable of the outer air and a crowding together for the sake of warmth. The smoke in the kitchen is generally beaten down into the apartment, and the odour is very unpleasant and everything exceedingly dirty. In the matter of keeping out wet, the Icelandic building also leaves much to be desired. Externally the frontage, if boarded as is sometimes the case in more recently-erected buildings, is rather imposing; but the simpler and smaller houses, mere cabins, may be almost ridden over unintentionally when descended upon from the slope of a hill, owing to their grass-green roof and low elevation. Every farm stands in an enclosed piece of ground, surrounded by low turf walls, called the *tún* or town, which provides the winter's hay, while elsewhere cattle and sheep seem allowed to browse at will.

There are, of course, stone buildings in the capital for the use principally of Danish officials; the Danish trading stations are ordinary wooden houses. Here and there a rich man, who has combined trading with farming, has had a complete house shipped from Europe; but these have all been erected recently, and are so exceptional that there are probably not half a dozen over the entire island, whose area is somewhere about the same as Ireland. There is nowhere any trace of the ruins of ancient buildings, and the only piece of old masonry existing seems to be the circular bath of SNORRI STURLUSON, the celebrated Saga writer of the thirteenth century. The older churches are of turf and wood, and of no architectural interest, though sometimes gaudily painted inside. There are no other public buildings, and even the Icelandic Parliament was held *al fresco* in the historic plain of Thingvállir, the deputies being housed in tents.

### GOTTFRIED SEMPER.

BY LAWRENCE HARVEY, A.R.I.B.A.

SOME thirty years ago there was in London a man who attracted considerable attention. He was known as a great artist, as a scholar of vast learning, and as a builder of barricades in an insurrection against his king and patron. The name of this man was Semper, architect of the opera house, museums, and other public buildings of Dresden, where he had been some time Director of the Academy of Fine Arts.

An exile coming to London, after such a political *faux pas*, could hardly expect to secure patrons in the Court, and yet Prince Albert took Semper under his special protection, obtained for him a professorship in the school of design at Marlborough House, commissioned him to make plans for the building of what was to be South Kensington Museum, and employed him to collect art treasures. This proves both the high opinion of Prince Albert for Semper's capacity as an artist and a teacher, and also the Prince's breadth of mind and determination to further the advance of art in England at any cost.

In the first Report of the Department of Practical Art (1853), we find a report of Semper on the armoury of Windsor Castle,

which was prepared with a view to borrowing some of the most interesting pieces for the South Kensington collections. He points out therein that nowhere is purity of design so well preserved as in the fashioning and ornamenting of weapons, on account of the paramount importance of their practical duties, and therefore weapons are the best of models to initiate students of design in the true principles of this art. Semper in another part of the same Report describes the course followed in the development of the art of working metal, its influence on the arts in general, followed by remarks on some of the new purchases for the South Kensington Museum.

The first Report of the Department of Science and Art (1854) contains a description of Semper's work as Director of the School of Design. He says that at first his pupils were young men who had been trained in the Royal Academy as artists, and who had acquired thereby a certain contempt for practical art. His principal difficulty was to make them understand the high importance of these practical branches, how much the general development of art depended on them, and how worthy they were of the best attention even of eminent artists. He succeeded in stimulating his pupils' interest by employing them to carry out his designs for the funeral car of the Duke of Wellington and other works with which he was commissioned. Later on the school of design was joined by numerous pupils belonging to the uneducated classes, such as artisans, and who followed the teaching of the museum only for short periods. With these pupils he adopted the course of throwing them at once in *medias res*, teaching them the elements of drawing and composition at the same time. The pupils on entering had no idea of perspective, and yet after a three-months' course they were able to carry out easily the most difficult perspective drawings, which, says Semper, they would not have been able to do if they had been taught in the regular systematic way. To this he added lectures, in which he showed them how all arts were governed by general laws, and the application of those laws to the divers branches of the practical arts and to architecture.

In the first Report of the Department of Practical Art, Semper lays down a general scheme of teaching for the divisions of metal and furniture designs. According to him, the teaching for the practical branches of art should follow more the type of the teaching which is given in workshops than that of art schools. There should be no division of pupils according to age or progress; the beginners must learn in the midst of the experienced workers. Studies have not to be carried on systematically, with hours or days appointed for each kind of work, but left to the free choice of the students, with the exception of such special lectures as must necessarily be given at some appointed time. The pupils were to assist the director of the workshop (this is Semper's name for a professor of art) in the jobs he has to carry out, and thereby the pupil could acquire a practical spirit as well as experience.

The objects of study were to be:—Geometrical drawing, comprising perspective, delineating of shadows, setting out of work, and modelling expounded with the help of examples, selected in such a way that the students would learn at the same time the elements of art and of construction. The study of style and styles, comprised history of art, description of technical processes and materials used, illustrated by examples, which the pupils would have to copy. There were exercises in composition and frequent competitions between the pupils, with prizes, &c.; visits to museums, workshops, and manufactories, accompanied by oral teaching; lectures on all special subjects necessary to the intelligent practice of the different branches of art, such as physical sciences, mineralogy, chemistry, &c.

Unfortunately, I believe, for English art, Semper was obliged to leave. His wife fell ill of consumption, and on her account he had to seek a more genial climate. What England lost, Zurich won, and it is owing to his influence that so small a city can hold its own against the great capitals of Europe for the grandeur and noble appearance of its public and private buildings. The municipal council of Zurich has lately decided to give to one of its public squares the name of Semper, and well it may, for Zurich bears as clearly the stamp of Semper, as Vicenza that of Palladio.

During his residence at Zurich Semper constantly regretted having left England; he wanted its vast resources for research, and dreamed of great opportunities of exercising his art as an architect on an imperial scale. How much of all this was pure



illusion, who can say? In Zurich he found the repose necessary for composing the work which will carry his name to remote generations of artists; and give him an almost unique position amongst architects.

In a few weeks a paper will be read on his famous book "Der Styl," at the Royal Institute of British Architects, but in the meanwhile it may not be useless to give some notion of his system. In what follows the principles put forward are Semper's, but for the expression of them I am solely responsible.

Semper says that art began with adorning and clothing our bodies, and branched out later on in adorning and clothing all the objects we use—weapons, tools, dwellings. It is therefore in the most primæval of practical arts that the grammar, the syntax, and the vocabulary of art have been formed, and the laws then laid down still govern all art creations.

Let us take, for example, a necklace. It is formed of two parts: firstly, a row of jewels; secondly, a string or chain to tie those jewels together. The jewels may be big diamonds or pearls of great value, which would suggest that the wearer prides herself on her wealth; they may be old Greek and Roman coins, and we would conclude the wearer a blue stocking. A young lady, the belle of the season, might adopt the device of having as centre jewel a large cameo, representing the triumph of Venus; and, for the other jewels, portraits of her rejected suitors, an idea perhaps more witty than modest, but which would leave us in no doubt as to the character of the wearer. We see, therefore, that in a necklace the jewels may have an ideal connection with the wearer, and, at all events, are the only part of the necklace where pictorial subjects may be brought in. The other part of the necklace has but one purpose to fulfil; it must remain in whatever way we may treat it a self-evident structural means of tying different objects together. We can characterise it as a ribbon, a cord, a chain; it may even be formed of cupids holding the jewels by each hand, but it can never be used as a field for pictorial representations. In this most primitive of human adornments we have at once learnt to differentiate pictorial from structural ornamentation, two elements of beauty which we will find again in all works of art—in architecture, painting, sculpture, music, and literature.

In architecture, we find the principles of our necklace most clearly applied in the treatment of the triglyphs and the metopes of the Doric temple. The triglyph is an upright support which carries the cornice, and is rightly characterised as such by fluting it in harmony with the fluted columns which support the whole of the entablature. The metopes or spaces between the triglyphs have no structural functions to fulfil, and therefore can receive pictorial subjects relating to the destination of the building they decorate.

In painting we have the jewels and the thread in every picture which deserves the name of a work of art; diagrams however correct, are not included, but only paintings which are pictures because they are decorations. It would be easy to show in the landscapes of Claude, Turner, or Constable, the jewels which give their pictures their deep interest, and the thread that is the background, the foreground, and the accessories which bind these jewels in one whole so as to form them into a picture.

In sculpture, the statue is often a jewel unconnected to any other object by an artistic string; but when drapery is called into play, we often use it as a means to connect one figure with the past or the future, thanks to the flowing folds; at all events the serpents of the group of Laocoon are a most remarkable piece of artistic cord.

In music, it seems to me, one may find the necklace of jewels tied together by a thread, but my technical knowledge of this art is too small to dare venture on a closer analysis, and I will leave the subject to be dealt with by a more authorised person.

In literature, the greatest trouble I experience in writing is the difficulty of stringing together my ideas; the jewels are ready at hand, but a good string, well suited to its work, is hard to find. Dickens is exceedingly clever in shaping the string which connects his valuable jewels, the undying characters which have become the household words of the English language. I remember one case in "David Copperfield" (by-the-by, David belongs to the string, not to the jewels), where Little Em'ly runs out on a projecting beam over the sea, to the peril of her life, and he adds the reflection:—"There has been a time since when I have asked myself the question, Would it have been better for Little Em'ly to have had the waters close above her head that morning in my

sight? and then I have answered, Yes." This is a piece of string with a vengeance, by which he at once invests Little Em'ly with dramatic interest and rivets our attention on her all through the piece. There are many other finesses of composition in Dickens for which I could find an equivalent in architecture, but I fear to be prolix and tire my readers.

I hope that the little I have said on Semper's ideas will suffice to awaken the interest of readers, and serve as a prelude to a resurrection of his teaching in England, which he should never have been allowed to leave. But before I close there is a curious coincidence which I should like to point out. Semper first gave out his theory of the art of clothing as the basis of all art about the year 1831. Carlyle, well versed in German affairs, wrote his "Sartor Resartus" in 1832. Is it not possible that this book is a skit upon our author's ideas, and that the original of Professor Teufelsdröckh is our friend the late Professor Semper?

## THE ARCHITECTURAL ASSOCIATION.

THE annual conversazione of the Association was held on Friday evening, the 10th inst., at the galleries of the Royal Institute of Painters in Water-Colours, upwards of twelve hundred being present, including ladies and gentlemen. Special arrangements were made that no hitch should take place in the service of the cloak and hat department, and that the visitors on their arrival and departure should not be delayed. It was also found unavoidably necessary to limit the number of invitations, instead of, as heretofore, inviting all Fellows of the Institute of Architects and other old friends.

The President, Mr. COLE A. ADAMS, took the chair in the Prince's Hall at 9.15, and distributed the prizes as follows:—

*Travelling Studentship.*—First prize and medal, to Mr. G. J. Oakeshott; second, of 5*l.*, to Mr. G. G. Woodward; honourable mention, Messrs. W. A. Bidlake, G. G. Wallace, and E. H. Selby.

*Association Medal.*—Mr. Arthur Sykes.

*Class of Design.*—First prize, Mr. C. C. Bradley; second, Mr. F. S. Granger; honourable mention, Mr. W. Dewes.

*Elementary Class of Design.*—First, Mr. F. M. Day; second, Mr. A. H. Hart; honourable mention, Mr. Ferguson.

*Colour Decoration.*—Mr. A. W. Hemings.

*Architectural Union Prizes.*—First prize, Mr. S. H. Seager; second, Mr. F. Massie. A third prize was specially presented to Mr. H. P. B. Downing.

*Planning and Specification.*—First, Mr. E. A. W. Barnard; second, Mr. M. Collins.

*Sketch Book Title-page.*—First, Mr. W. A. Pite.

*Essay Prize.*—First, Mr. E. P. Tucker.

*Lectures on Construction.*—First, Mr. N. Nisbett; second, Mr. H. S. Saunders; third, Mr. J. W. Stonhold.

*Lectures on Architecture.*—First, Mr. G. McCombie; second, Mr. H. Abraham; third, Mr. N. Nisbett.

### President's Address.

The PRESIDENT then delivered his address, in the course of which he said:—

It is one of the obligations of the office of President to deliver an address on the occasion of the annual conversazione, and one of the obligations you have entered into this evening by the attendance you have honoured us with to listen to it. I see no escape for either of us. I will endeavour, however, to be as brief as possible, so as not to weary; and you, on your part, will kindly extend to me your patience for a short time before adjourning to lighter and more congenial amusement. You have just witnessed a ceremony which, I hope, has interested you; the awards of merit have been made more valuable to the gainers of them by your generous applause, and that touch of sympathy which every one values. The ceremony of bestowing the prizes has been a very short one; but it has taken a year's work to win them. On the walls of the gallery above you will see something of the labour involved, and I hope you will not leave this evening without at least a glance at them. You will see how much labour it takes to win distinction, and obtain some idea of the study required to make an architect. What you will there see is but a fraction of what is necessary for that purpose. The Architectural Association was established several years ago for the object of mutual improvement and instruction in the art of architecture, and upon a voluntary basis. The senior members impart instruction to the juniors, who in their turn become teachers. We have lectures, classes, discussions, and exhibitions for the study of design and construction; and in our ranks are all sorts and conditions of men, who go to make up the profession. Among them are those who are in practice, but who retain their names on the list of members from the affection they bear to the society, which has aided them in their work, and the desire to keep touch with those who yearly join it, and many remain in the ranks to render help in the work carried on. Others—and a large proportion—are in offices as assistants, anxious to avail themselves of the instruction to be



obtained at a very small cost; and, lastly, we have yearly drafts of young men who are serving their articles, and have just entered on the duties of the profession they have selected.

The advantage of this chain of connection from the first link to the last is obvious, and the creation of an *esprit de corps* and kindly sympathy which is most advantageous. We claim that the Architectural Association is a unique body, doing valuable service to the public and to the profession, breaking down the barriers of little jealousies, and forming that union which is strength. Among the senior members are those who have tried their armour in the conflict for fame. Many of us have had to confess that it has been found sadly wanting, some have been more fortunate than their fellows, but, if their career is closely watched, it will be found that honest, hard fighting with the obstacles and enemies to success has led them to victory. Others there are who, from one cause or another, have never succeeded in rising from the ranks, and yet have, as good soldiers, done their duty fearlessly and well; and who, through good and evil report, have fought on or worked in the trenches during a campaign, often dreary and disheartening, through long winters of discontent, it may be with odds against them which have been all too much. It must needs be so; all cannot win in the race or take even a second or third place, and yet may still bravely do their duty and win the highest commendation, from the fact that they have done their best. Lastly, we have those on the threshold of life entering on a laborious career, full of hope and trust, eager to succeed. To them at present all is sunshine, and the troubles, disappointments, and anxieties of a professional life have not thrown their dark shadows across the path to fame. To their eyes are presented visions of the magnificent buildings they will be called upon to erect—cathedrals and churches of noble proportions and gorgeous colouring; castles and mansions for the noble and wealthy; civic halls and buildings to grace our towns. Mirages too often these visions prove to be to these travellers through the desert; but it is well that they should start with a high ideal; all is possible to genius, combined with hearty untiring zeal and worth. Too soon bitter experience will teach its lesson, but youth without such healthy ambition can never succeed, and from these ranks of young and hopeful recruits must come the architects of the future, be they members of our body or not. Dame Fortune sits on her gilded throne, and has not exhausted her supply of wreaths for the victors; let us wish them God speed, and be careful to throw no discouragement on honest efforts to gain reward and distinction.

To those who have given any attention to the study of architecture, the progress of late years must be apparent. A glance only at the exhibits in the galleries upstairs, so kindly and generously lent to us for this evening, and contributing so largely to the enjoyment of it, will go a long way to prove this assertion. These exhibits, it is true, are only accessories to architecture, but they are the outcome of the improvement which has taken place of late years. Many of the objects on view are designed by architects in practice, who are members of this Association, and all the exhibits will repay your careful examination. It is too much the fashion to sneer at modern architecture and those who practice it; but let anyone whose eyes are not hopelessly blind examine with care and attention the buildings, both ecclesiastical and civil, which have been erected during the last quarter of a century, and one may go further back than that. The Gothic revival has produced men who have covered the land with churches and buildings, many of which are masterpieces of design, and which, I venture to think, future generations will do greater justice to, and treasure them as precious legacies. The works that will live are the creations of minds which have devoted their lives to the study of their art; men who have unceasingly toiled to learn their craft, and who have ransacked the treasures of the past with an absorbing love for the work, which is above praise. There are very few old buildings in this country, or on the Continent, that have not been visited, and careful drawings made of such parts which would serve for study and be useful in practice. That the result of this should be a too close resemblance to ancient architecture as to justify the charge of forgery in many cases is natural, but in the works of the best masters and by their works progress in modern architecture should be judged; you will always find originality and a distinct adaptation of forms to modern usages, and anyone well acquainted with old work will at once distinguish and appreciate the merits of the modern. The old Gothic architects were just as much copyists as the modern ones, or else how is it that the same plans, the same features, the same forms, and the same mouldings may be traced in buildings, from one end of the country to the other, and in far less variety than you see now in modern work? The great advantage the old builders possessed over ourselves was that they were happy in living in an age when they could practise their art in one style, and so bring it to greater perfection. Changes came very slowly to them, and men were left more to the quiet contemplation and development of their art, and to practise it free from the competition, rush, whirl, and excitement that attend upon us moderns. So much of the charm of old work lies in its antiquity, and in the sentiment that surrounds it. Time is a skilful artist, and with loving hands colours the walls and roofs, gently tones down the

interior, darkens the woodwork, knocks off sharp edges, softens and refines any crude contrasts, and produces generally that charming *ensemble* we call picturesque. There are many old buildings which, if the magic wand could pass over them and change to what they were when the builders left them, would be passed by as unworthy of notice. Do not think for one moment I am drawing comparisons to the disadvantage of the past; far from that is my intention; but I plead for a fairer and more honest examination and judgment upon the work of the present, and for greater discrimination. I do not assert that the Gothic revival has produced work so grand and noble as the source from which it has sprung; the wonder is that such progress towards perfection has been made amidst difficulties which only those who adopt our profession can have any distinct knowledge of. What has been done in time past it is possible the world may see again, and with the progress that has undoubtedly been made of late years it is too Utopian to hope that buildings shall yet arise which shall be a delight and wonder to coming generations?

The hope of modern architecture rests much with the public. It is sad to find how people, as a rule, care little for architecture at all, and yet how lavish many are in expressing their opinion about it. The facilities for travelling afford opportunities for visiting edifices which are the admiration of the world. But they are not studied by the mass; hasty judgments are formed and opinions expressed, borrowed chiefly from writers, good, bad, and indifferent. Such people fail to see the lesson taught by what they have visited, and to analyse the reasons for their likes and dislikes. Education is making rapid strides in every branch, and may be in time a more intelligent reasoning will take the place of the indifference to the study of architecture which characterises us as a nation. Should that time come, when architecture shall be studied with delight, then the sure outcome of this will be a revival which shall eclipse all our previous efforts. Has not the increased and increasing cultivation and love of music resulted in extending, to an unparalleled extent in this country, the practice of it, so that it can no longer be said that we are not a musical people? Have we not now discriminating audiences who listen with ever-increasing delight to good music, and who create such a demand for it that the supply comes, and throughout the length and breadth of the land people flock to hear the masterpieces of composers superbly rendered by artists who, unless they are excellent, get but a scant hearing? Note, too, the progress made in the drama, and the high position in cultured society that the professors of both arts now take, and how keenly their careers are followed and watched. Such interest is highly appreciated by those who minister to the tastes and recreations of the people, and the greater the interest taken, the greater is the effort to be worthy of it. The musician or actor who appears before an audience capable of understanding and sympathising with his interpretation of the part he is performing, puts forth all his best efforts, and gives the result of long and patient study, the only passport to success. The art of painting, too, is better understood than it was. The education afforded by the numerous illustrated works which yearly teem from the press have been fruitful in their teaching. The instruction given in drawing and painting at so low a charge as to place the learning within the reach of most, has doubtless largely contributed to advance this art, and the opportunities afforded by the numerous art exhibitions and galleries all over the country have, in a thousand ways, helped to cultivate the national taste. Sculpture, that sublime art, is less understood, less sought after, and, as a consequence, less practised. To produce a masterpiece, perhaps, requires the very highest artistic and intellectual capacity; but, unhappily, so slight is the encouragement given to the art in this country, that few have heart or courage to devote their lives to the study of it. If, as the wheel of time goes round, men will turn to the study of architecture, they will become more critical in their judgment, and demand a higher standard of design and workmanship than they do at present. They will seek out for employment only those architects who are architects in deed as well as in name. It is one of the misfortunes of the present time that anyone may call himself an architect who likes, and yet may be, and often is, incapable of exercising his profession.

If the public only would exercise a wider discretion, and seek out the men who are capable of designing and carrying out the buildings themselves, much that is so bad in architecture would cease off the face of the land. In time, perhaps, a diploma will be granted to architects who are able to satisfy the examiners that they are men skilled in the art. Such a course would be a guarantee to the public, and shut out men who have no sort of right to be trading on the ignorance of their employers. A step in this direction has quite recently been taken, and no man can now become an Associate of the Royal Institute of British Architects without passing an examination; make it compulsory that no man shall practise without this test, and improvement will take place. Such a step might not produce all the results hoped for from the artistic side; that difficulty must one day be met by a college of architecture presided over by distinguished professors; but from the practical side great good would follow. Buildings would be erected that would be better in construction and planning, and in that most important condition, better in their sanitary arrangements. With the responsibility which a legal status would give,



some obstacles would be raised up against speculative building which, as at present practised, is such an absolute disgrace in too many instances to the architecture, if it may be called so, of this country. As long as the public are content with the present state of things, there is no remedy possible, but in all fairness they should be discriminating in their censure of architects and their work, and not judge the architecture of their time from the houses most people are compelled to inhabit, which are, for the most part, the creations of men sadly ignorant of design and plan. Let a taste for architecture be cultivated, then a demand will arise for good and intelligent design, and there is the material always at hand to meet the supply. Signs are not wanting that a taste for architecture is being more extensively cultivated, and the more we as architects can foster this taste the better will it be for that art which is the mother of all the arts of the craftsman. Let but the public learn discrimination, and our cities may yet be made beautiful, and the sister arts of painting and sculpture sought after for the adornment of the fabric. Let but encouragement be given in high and influential quarters, and the painter will be tempted from his easel to learn the craft of architecture, and with knowledge to apply his brush upon the walls of buildings, and the sculptor to leave his studio and embellish the fabric with lovely forms. There is now a want of touch and sympathy between architects, painters, and sculptors, which affects most seriously the highest development of the arts; but in this aspect, too, there are cheering signs, and one may point with pleasure to the walls of South Kensington Museum, and anticipation will be eager to see the result of the intended decoration of St. Paul's by two of our great modern painters, combined with the work of a member of our own body for the architectural treatment. The opportunity should not be missed of inspecting the experiments which are now on view in that splendid monument of Wren's genius.

An address on an occasion like the present should, I believe, touch upon recent events. Last year your attention was called to the competition for the new Admiralty and War Offices. Now we know the award of the judges, and I believe I am right in saying that their verdict has been generally endorsed. Of the fairness that has characterised the whole adjudication, I do not think there is any reason to doubt; of the various merits of the designs, opinions are sure to differ. It is a very great pleasure to the Architectural Association, that one of their past presidents, Mr. Aston Webb, in conjunction with one of their friends and lecturers, Mr. Ingress Bell, obtained the most honourable distinction of selection in the final three. They have merited and have to the full, ours, and I am sure I may add, your, heartiest congratulations. The winners of the prize, Messrs. Leeming, of Halifax, comparatively young men, and before this unknown to the general public, deserve also recognition for their splendid drawings.

Touching the question of competitions, let me add that during the past session an Association of Architects has been formed, including nearly all the leading men, who have undertaken *not* to compete unless a professional assessor is appointed to guide the promoters of competitions in their selection. The general fairness of this principle cannot, we think, be disputed. Is it not only right that when men, in the hopes of winning a prize, devote their best energies to the perfecting of their designs, that they should have the justice dealt out to them of a skilled professional man to weigh the merits of their work, instead of leaving the selection alone to a body of laymen who, however disposed to act fairly, cannot possess that knowledge of the art or technical skill to decide upon the rival merits of the designs submitted? That universal satisfaction to all parties will be the result of this movement is too much to hope; but that justice is far more likely to be done, and the most deserving design selected, may, we believe, be confidently expected in the majority of cases.

Of the phase that architecture in this country is passing through at the present time, and to what it is tending, it is difficult to speak. In church architecture we see signs of a return to a style which a few years ago was considered too debased to follow. But some of our most eminent practitioners are never tired of insisting upon the merits of the Perpendicular period, and have shown by their works how, in skilful hands, buildings full of grace and beauty may be erected, admirably adapted to their purpose. The revival of brick architecture in the style which, for want of a better name, we call Queen Anne, is still in full vigour; but to the observing eye a change towards a purer phase of the better periods of the Renaissance may be traced. The advantages of this style for domestic and civil buildings have been made abundantly manifest, and we are now in possession of edifices brimful of piquancy and picturesque effects, admirable in planning and arrangement. The danger of this style lies perhaps in its want of defined principles, and the licentiousness which is the natural result. Extravagance in forms, senselessness in designs, a too great straining after effect, a want of repose, an absence of harmonious simplicity and grandeur, too often spoil much of the work that one sees, and this is a drag upon real progress. Such architecture presents unhealthy teaching to the young student, who is naturally impressed with the everyday influence he is brought in contact with, who, seeing that such design is the fashion, neglects the study of those masterpieces of his art which he should study as the classics of it. The violent phase of the Queen Anne mania is a great deal the outcome of

modern æstheticism, which has come in these days to mean the worship of blue china and bric-à-brac; the rage for Japanese art, and the frequent adoption of the saddest and most dreary of colours for the decoration of our houses; in painting the portrayal of figures, often exquisite in form, but of sex doubtful—dressed in sad-coloured garments, with mournful and consumptive-looking faces, giving one the idea that the artists had sought their models from the hospitals; they are generally depicted in shrinking attitudes, and with close-clinging, transparent, diaphanous drapery, which gives one the impression of having been put on damp, causing those ailments which their faces tell the story of, and this damping process also seems to have had a disastrous effect upon the colours, which have a washed-out appearance, in striking contrast to the pictures of healthy-looking men and women whom artists in another age delighted to portray. Many of these pictures are undoubtedly of the highest order of merit; but is not the following of this purely ideal school of painters death to healthy progress? Take the works of the grand old masters of the Renaissance school, who went for their models direct to nature, and investing them with the poetry of true genius have given us subjects for delight and instruction; their canvases breathe with healthy life and happiness; we see in them men and women who lived and did their part in the days in which they lived. The pursuit of art on these lines is surely more robust and therefore more healthy. The pursuit of art on the other lines, neglecting the teaching of healthy nature, has a tendency to decay. In the hands of a few, beautiful results of a certain kind are found, but the following of such masters cannot be otherwise than a mistake, in my opinion. Much of this kind of painting is already disappearing, and our picture-galleries show a return to nature, who is ever bountiful, and ever renewing her work with lovely models for the painter's art. We have in our midst artists who have never adopted the consumptive model, but have given us delightful creations of fancy, which have made the human form more lovely to our eyes, and invested sea and sky and earth with charms and teachings which we had never dreamt of before. Art is emerging on all hands towards a brighter and stronger ideal, which, let us hope, will yet produce great and mighty results. We must take to heart the consolation which every street boy and barrel organ is so fond of impressing upon our attention, and "Wait till the clouds roll by," and disclose the genial sun, giving health, life, and increased happiness to toiling man. With this wish, and with a hearty welcome as the mouthpiece for the time being of the Architectural Association, I must conclude, praying your indulgence for this address, and your forgiveness for the many shortcomings with which it is, I fear, all too full. The work of an architect lies more in his pencil than in his pen, and our shortcomings as public speakers should be more gently dealt with than those of men trained in the art of composition and debate. Our efforts must bend to the fulfilment of our motto which you will find on your programmes to "Design with beauty, build in truth." By our works we must stand or fall—poor dumb mouths, and bid them speak for us.

The prize drawings of the students were exhibited, and a series of plates contributed to the Association sketch-book, water-colour drawings by Mr. R. Phene Spiers, and Mr. Stannus' drawing of his modification of Alfred Stevens' design for the decoration of the cupola of St. Paul's.

The exhibits of art furniture and decoration this year engaged the special attention of the company, surpassing even previous years in excellence and variety. The ornamental wrought ironwork of Mr. A. Newman, of Maddock Street, was particularly worth notice. Space will not, however, allow of more than giving the names of the firms who lent their valuable exhibits for the occasion, as follows:—Messrs. Jackson & Graham, Morris & Co., Cox, Sons, Buckley & Co., Coalbrookdale Company, Trollope & Sons, Woollams & Co., Jeffrey & Co., Hart, Son & Peard, Richardson, Ellson & Co., Salviati, Longden & Co., London and Sheffield; Collinson & Lock, Holme & Co., Shuffrey & Co., Doulton & Co., &c.

The programme of music for the evening was executed under the conductorship of Mr. W. Winterbottom, by the band of the 2nd Life Guards, and all the arrangements for the visitors were excellent.

## EARLY CELTIC MONUMENTAL INSCRIPTIONS.

THE first of this year's course of the Rhind Lectures in Archæology was delivered on Monday afternoon in the Masonic Hall, Edinburgh. The lecturer was Sir Samuel Ferguson, President of the Royal Irish Academy, and the subject of the course is "Early Celtic Monumental Inscriptions—The Ogham."

Sir Samuel Ferguson observed at the outset that the only Celtic monumental inscriptions which could be said at the present day, as a class, to need further elucidation, were those conceived in the Ogham form of writing. He should, therefore, be concerned in the present inquiry with the Ogham variety, and such topics as legitimately associated themselves with it. Monuments so inscribed existed in great numbers in Ireland. There were



eighteen in Wales, two in South England, five in the mainland of Scotland, and four in the Orkney and Shetland Islands. The key to their reading has been traditionally preserved in Ireland, and could be reconstructed, if necessary, from the Roman epigraphs which accompany and echo them in the biliteral monuments of Wales. He did not say bilingual, for the subjects of the texts were almost exclusively proper names, connected by the word *Miqi*, meaning "son of." Although a series of proper names was not calculated to excite much interest in the abstract, there were various historical and palæographic considerations which give these monuments a claim to the attention of British archæologists not much inferior to that of the Rune for Scandinavian scholars. The Ogham is of the same family with the Rune, the characteristic of both kinds of writing being the employment of straight strokes, easily carved on wood or stone, for forming the alphabetic letters. The original Runic alphabet, however, is not, like the Ogham, of a cryptic nature; but it is the foundation on which the cryptic Tree-Runes, having several points of resemblance to the Ogham, are founded. Rune, in the Northern languages as well as in the Celtic, signifies something secret; but the Futhorc or Scandinavian alphabet cannot be said to be more secret or mysterious than any other, and if it bore the name of Rune in its original state, it was because alphabetic writing of any kind was deemed a mystery among the northern populations to whom it was first imparted, or amongst those by whom it may have been invented. The Tree-Rune, however, founded upon it, is a designedly secret and highly artificial kind of writing. The lecturer proceeded to contrast the Runic Futhorc, or alphabet, with the Irish Bethluisnion—an alphabet designated altogether by names of trees, but represented in its Oghamic equivalents by straight strokes, the significance of which depends primarily on a division of the Bethluisnion into like categories as the Futhorc, with this difference, that, in preparing the Bethluisnion for its relations with these equivalents, it is divided into four categories of five each. The Futhorc is arranged in three divisions. The relations of the Ogham to the Rune were further traced. Speculating on the origin of the Ogham, he observed that if the Ogham be not founded on the Roman alphabet, renamed and remarshalled into the Bethluisnion sequence, the inference at this stage of the inquiry would be that its many resemblances to the Tree-Rune connect it with the North of Europe, or with the source from which that region received its letters. The account which the Irish themselves give of it is, that the Ogham was brought in by the early half-mythical colony of the Tuatha-de-Danaan, whom they bring from the northern parts of the world through Scotland; and they allege that Cucuinne, fifteenth in descent from Milesius, who overthrew these Tuatha, was the first who used it in chronicling events. There is one feature, which the lecturer described, in the Ogham which seemed to establish that its framers were of the Latin rather than the Teutonic branch of the Teutonic family. If derived from the Rune, the framers of the Ogham had not succeeded in improving on the original, either in perspicuousness or fitness for monumental use. The Ogham is very much more cumbrous than the Futhoric, and, notwithstanding the apparent simplicity of its arrangement, has an inherent element of uncertainty unknown, he believed, in any other alphabet. Sir Samuel Ferguson proceeded to show how the Ogham was much more liable to error than the Rune, and pointed out how the difficulty of accurate transcription and other causes cast during a long period the study of the Ogham by scholars into disfavour. With many cases of uncertainty as to the actual existence of inscriptions, or the possibility of transcription, before them, it was not surprising that scholars fifty years ago looked on Oghamic investigation as an unpromising subject. But the lecturer described the change that soon set in, and showed how that one of the great Irish scholars—O'Donovan—who had shared the doubts referred to, had to acknowledge, when he found himself under the Ogham-inscribed roofing-stones of the cave of Dunluc, that he stood in the presence of a long past age, speaking to us by intelligible, articulate signs. While the Munster antiquaries were adding to the number of their discoveries of Ogham monuments, but not advancing in the accurate transcripts or reliable inductions, the Rev. Dr. Charles Graves, now Bishop of Limerick, subjected the Ogham texts, so far as he could be assured of them, to the process which may be termed the cypher test, assuming them to be written in the Irish of our oldest manuscripts. The proportionate percentage of each letter in the known text identifies the corresponding letter in the cypher. On this principle, it appeared that the traditional key was in substantial accordance with the theoretic values of the letters so deduced, and Dr. Graves entered on further Oghamic inquiry with the assurance that he proceeded on firm ground. Shortly afterwards he was rewarded by the discovery of the biliteral monument at St. Dogmael's, in Wales, where the *Sagramni fili Cunatami* of the Latin is echoed by the Oghamic *Sagrani Maqi Cunatami*, putting the equivalence of *Maqi* to "son of" out of the way of doubt or question. Speedily other discoveries followed. It was ascertained that the Scottish Newton stone, besides its seemingly Romanesque epigraph, bore a long Ogham inscription, and that other Ogham inscriptions existed both in Wales and Scotland. One from Bressay, in the mainland of Shetland, was submitted to Dr. Graves, who found that the language was Norse, and that it seemed to commemorate a

daughter and grandson of a known Scandinavian personage of the ninth century. After speaking of the labours of other scholars in this work, and the attention paid to it by the Royal Irish Academy, the lecturer, in conclusion, said the main questions now agitated are—Whether the Ogham is of Pagan or Christian origin; whether, if of Pagan origin, any of the monuments are Christian; whether the Welsh imparted it to the Irish or *vice versa*; and whether its forms belong to a vernacular or to an artificialised language. He should not be able definitely to clear up the meaning either of *Maqi mucoi* or of *Maqi decedda*; and he should have to leave the question of Irish or British, as well as of Pagan or Christian, origin dependent on the question of language, which he did not profess to solve. He should often have to say "perhaps," and often to present alternative conclusions. He should be able, however, he thought, to satisfy them that the bulk, if not all, of our Ogham monuments were Christian; that some of them represent as old a Christianity as had ever been claimed for the Church in either island; and that the *Scoti in Christo credentes*, to whom Palladius was sent by Pope Celestine in the fifth century, were, especially in the south of Ireland, a more numerous and better organised community than had hitherto been supposed. He should, he thought, bring Irish Pagan and British Christian monumental usage into actual contact with Wales and contribute something towards the further elucidation, as Christian monuments, of the sculptured stones of Scotland. The lecture, which occupied upwards of an hour in delivery, was illustrated by diagrams and casts of several of the most interesting of the Ogham inscriptions that had been discovered in Ireland.

#### YORK ARCHITECTURAL ASSOCIATION.

ON Saturday last, on the invitation of the President and Council of the Leeds and Yorkshire Architectural Society, the members of the York Society visited Leeds, and paid a series of visits to important architectural works now being or recently carried out. Amongst those visited were the Coliseum, the Yorkshire College, and the Hook Memorial Church. The party on arriving at Leeds were met by Mr. Edward Birchall, F.R.I.B.A., Mr. Chas. H. Thornton, hon. sec. of the Visit Sub-Committee, and Mr. W. Hoffman Wood, who conducted the members to their rooms in Albion Street, where refreshments were partaken of, and after an inspection of the museum had been made the party proceeded to visit the Coliseum, where the York Society were joined by the members of the Leeds and Yorkshire Architectural Society. An inspection was made of the large building. The assembly next inspected the chief object of the visit—the Yorkshire College. The party, on arriving at the College, were met by the clerk of works, Mr. Batty, who very cordially conducted them over the many and varied departments of the College, which have been designed by Mr. Waterhouse, A.R.A. The company also visited the Hook Memorial Church and St. John's Church. We understand that the York Association has invited the members of the Leeds Society to visit York on Saturday, the 25th inst.

#### WINDSOR FOREST.

AT a recent meeting of the Windsor and Eton Scientific Society, the Rev. Dr. Gee, vicar of Windsor, read a paper on "The Trees of Windsor Forest." In the course of his remarks he said our knowledge of the Forest dated from 1820, when the present arrangement was introduced. In 1814 Kent reported that there were 50,000 good trees, yielding a million and a half cubic feet of timber; 1,900 acres were sold, 25,000 $\frac{1}{2}$  worth of timber cut down, and 3,000 acres planted. The Great Park now consisted of 3,000 acres, the Little Park of 500, and the Forest of 10,000 acres. The soil was poor and wet, and little to be envied by agriculturists. Of the three principal trees—the oak, the beech, and the elm—the oak might be claimed as an aborigine, although much of the old oak timber in this country was not of the same kind as that now in use. The beech tree claimed as its own the neighbouring county of Buckingham, to which it gave its name, as well as to "book" and to "bacon." The elm was the shortest-lived of these three trees, its limit being about 200 years, while it began to decay at the age of 80 years. The trees in the Long Walk were planted in 1680 by Charles II., and the Walk was perfected by William III., though the ground was not appropriated until the reign of Queen Anne. The number of the trees, which, though very fine, were inferior to those at Eton College, was said at one time to be 1,652, the double avenue being 70 across. The finest-grown oaks were at Cow Pond, just at the back of the Rhododendron Walk. One was 70 feet high, and rose 40 feet before it threw out a single branch; and there was a tree 100 feet high near Cumberland Lodge. In Cranbourne Chase stood the largest tree known in the Forest. It was hollow, and might have existed 800 or 900 years, its greatest circumference being nearly 40 feet. Outside the Forest Gate, at Ascot, was a fine specimen of a tree of middle age. It was in about the 600th year of its life, and was about 27 or 28 feet in circumference.



## NOTES AND COMMENTS.

AMONG the impediments to the professional organisation of architects is the condition of local societies. It may be safely asserted that there is not a society in any town in Great Britain which adequately represents the strength of the architects in the town. There is always a great difference between the number of practitioners who are eligible for election and the number of members. A committee of the Northern Architectural Association have been considering the subject, and they are of opinion that an energetic endeavour should be made to induce the whole of the practising architects in Northumberland and Durham who are not yet members to join the Association, with a view to its becoming thoroughly representative, and to its carefully preserving and advancing the interests of the profession, encouraging and developing all matters relating to art and science, and giving substantial inducement in the way of prizes to the younger members to perform good work. The best way to attain that end, in the opinion of Mr. OSWALD, one of the members, would be by removing to a more suitable place for meetings, and by forming a library and museum. Books and collections of casts are costly, and we doubt if they are always attractive. If some of the members would propose the experiment of meetings less formal than those which are held in Newcastle and elsewhere, there might be more chance for the Association. But so long as it is supposed to be incumbent on members to compose a long paper, it is not surprising that men eschew societies.

THE foreign visitor to Edinburgh can hardly fail to be amazed at the law which has allowed what is probably the most beautiful street in Europe to be injuriously affected by the Waverley Railway Station. In London there is much to condemn in the structures which have been raised by railway enterprise, but as the surroundings in the metropolis are less picturesque than in Edinburgh, the contrast is not so remarkable. It is now proposed to "improve" the Waverley Station, but so far as can be judged from the description, all that is to be done is to construct new sidings, platforms, and approaches. We are told that already there is a new "handsome signal-box," and that "an effort is now being made to remove the ugly aspect which the parcels' office on the Waverley Bridge has hitherto presented. The tumble-down appearance of this block has been an eyesore for years. The walls are now being renovated, portions of them being in course of removal and reconstruction; and detailed ornamentation of the windows and corners and of the elevations generally will put the building in harmony with the goods office at the extreme south end of the bridge." But no vamping can transform the parcels' office into an object that is worthy of its position. It should be removed without delay, and if one has to be placed in the same place, let it be one that has been designed by an architect. There is a Cockburn Association in Edinburgh, but the members appear to be as much afraid as other men of interference with railway prerogatives.

ONE of the customs of the brickmaking trade was exemplified in a case which was tried a few days ago in Canterbury. Messrs. EASTWOOD & Co., Limited, who, it is needless to say, are brickmakers on a large scale, were compelled to summon one of their moulders for money which had been overdrawn. The defendant undertook a moulder's berth for the season ending September 25, with the understanding that the rate of payment would be 3s. 9d. per thousand bricks, of which sum 3d. per 1,000 was to be retained as "pence money." He made 449,000 bricks during the season, but had drawn payment for 469,000. The defendant's answer to the case was that the "pence money" retained by the plaintiffs was more than sufficient to meet the 3l. 10s. overdrawn. It was admitted that the "pence money" retained amounted to 5l. 12s. 3d.; but, by the custom of the trade, the defendant had forfeited all his "pence money" by leaving his employment before the end of the season—viz., on September 8, instead of on September 25. "Pence money" is retained as a guarantee that the moulder will continue in his employment to the end of the season, and also that he will take care of the bricks and keep them protected from the inclemency of the weather even beyond the period of moulding, until they are actually in the kiln. A man forfeits the "pence money," even if the employer's loss is less than the amount of the "pence money," but, if it is greater,

the employer can claim damages for breach of contract. The defendant's plea was that his gang had left him, but the County Court Judge said that was his own affair, and, as His Honour was satisfied that it is the custom in the brick trade for a man to forfeit his "pence money" should he break his contract, judgment was given for the plaintiffs.

THE conversazione of the Architectural Association, which was held on Friday in last week, attained the success which was anticipated. There may be larger gatherings in the London season, but in none is there apparently more enjoyment. Mr. COLE ADAMS's term of office has been satisfactory to the Society, and his address was exactly suited to the occasion. It was assertive of the rights of the younger members, without being dogmatic or unfair. The prize-list was a testimony to the zeal of the Association, and it was satisfactory to learn that only one prize had been held back this year.

THE lectures which Mr. RUSKIN will deliver this session as Slade Professor, in Oxford, will be on "The Pleasures of England," and are to form a sequel to last year's on "The Art of England." The following are the subjects:—Lecture I.—BERTHA to OSBURGA, "The Pleasures of Learning," October 18 and 20. Lecture II.—ALFRED to the CONFESSOR, "The Pleasures of Faith," October 25 and 27. Lecture III.—THE CONFESSOR to CŒUR DE LION, "The Pleasures of Deed," November 1 and 3. Lecture IV., CŒUR DE LION to ELIZABETH, "The Pleasures of Fancy," November 8 and 10. Lecture V.—Protestantism, "The Pleasures of Truth," November 15 and 17. Lecture VI.—Atheism, "The Pleasures of Sense," November 22 and 24. Lecture VII.—Mechanism, "The Pleasures of Nonsense," November 29 and December 1. There is much originality in the subjects, and the titles have been selected with Mr. RUSKIN's customary aptness of phrase.

IF our readers wish to have a hearty laugh, they cannot do better than invest a shilling in a little book called "Trowel, Chisel, and Brush." The joke is that the thing is supposed to be "a comprehensive summary of the works of the Great Masters," and an aid to education in the Fine Arts. On every page there are amazing statements, which, on account of the seriousness of the author, are gems of humour. The Corinthian Column stood, we are informed, on "a square base, surmounted by carved rings;" the Doric was "five times higher than its diameter;" the Ionic Caryatides "were placed in front of the columns." In speaking of Indian architecture, it is said that the Taj Mahal is the most remarkable example of Mohammedan work. Decorated Gothic is supposed to be a "degenerated" form of "pure Gothic." Stained glass windows were introduced to produce "an imposing light and a musical rendering of the services of the Church." The Thames Embankment is united with the Houses of Parliament and the Royal Courts, as if it were a Gothic work. In other branches of art there is similar humour. Thus in painting we learn of a THOMAS STOCKARD, who was "a book illustrator, and produced several successful paintings." Sir AUGUSTUS CALCOTT "excelled in coast and rural scenery; his masterpiece was *Raffaello and the Fornarina*." TURNER also produced "highly valued classical and historical pictures." The worst of a book of this kind is that the fun will not be always recognised, and that ignorant people will imagine they are about to secure "a bird's-eye view of art."

THE Castle of Lochmaben is associated with events in the career of King ROBERT BRUCE, and is therefore one of the historic ruins of Scotland. The hereditary keeper and governor, Mr. HOPE JOHNSTONE, is desirous of preserving the ruins, and with this view about two years ago he proposed to have the inner fosse cleaned out. But a holder of the land demurs to the work on the ground that it would be a violation of his rights, as his tenants and those of his predecessors have pastured cattle during a very long period on the land to be disturbed, and on the land surrounding the castle. This claim is grounded on a clause in the conveyance, which excepts and reserves "the Castle of Lochmaben within the gates thereof." But the fosse would hardly come under the designation—and there is much probability that it is excluded. The inhabitants of the district are proud of the old castle, and they propose to memorialise the Crown in favour of its preservation.









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BY MESSRS SPAU



18<sup>th</sup> 1884.



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## ILLUSTRATIONS.

DESIGN FOR THE ADMIRALTY AND WAR OFFICES.

THE design published this week is by Messrs. SPALDING & AULD, and it is the last of the series of selected designs which were considered in the second competition for the Government Offices.

## INTERNATIONAL EXHIBITIONS.

A PAPER on "International Exhibitions" was read lately by Mr. E. W. C. F. Schmidt, A.R.I.B.A., in connection with the exhibition at Eastbourne. The author began by referring to the part taken by his father in promoting the Great Exhibition of 1851. He first suggested that instead of a national affair only, it should be an exhibition from all parts of the world; it was then altered to "All Nations," and then to an "International Exhibition." France had such exhibitions as far back as the year 1820. It had been stated that the suggestion for an international exhibition in England emanated from Sir Henry Cole; but he (Mr. Schmidt) claimed it for his father, who in 1845 was engaged in working out the idea, and he had brought an account of the first stages of the work as recorded in the journals of the day, and begged to hand them round to the audience, as he wanted them to keep the facts in their mind's eye. He might remark that it brought his father into correspondence with all the principal artists and inventors of the day. It was then the law in France—in 1845—that all works had to pass the Chamber of Deputies, and they would find it recorded in an issue of the *Moniteur* of that date, that the late Mr. Schmidt's name was mentioned in connection with works produced by his father. The lecturer also produced the first circular issued by his father in connection with the Exhibition of 1851, and other documentary evidence to show that the late Mr. Schmidt had several interviews with the late Prince Consort, and that the suggestion to have an exhibition of the manufacture of arts of all nations emanated from his father. The Americans had claimed the invention of the sewing-machine, but the Royal Institution was the first place at which one was ever seen, and it was one upon which his father lectured at the Royal Institution, and also upon the first brick-making-machine. The late Prince Consort sent for him several times to Buckingham Palace. With regard to the influence of international exhibitions on trade and commerce, they were used for the introduction of new inventions and the interchange of ideas; commerce had been increased, and emulation had been fostered, because the medals and diplomas distributed had a commercial value, and many entered into keen competition. With regard to the Exhibition of 1851, it was said that it would be the commencement of the reign of peace, and people thought the Millennium would begin, but unfortunately it was not so, as there had been no less than ten wars since the time, and one was now going on; and the exhibition in Paris was actually held while war was going on.

## THE REFACING OF WESTMINSTER ABBEY.

THE following letter from the Secretary of the Society for the Protection of Ancient Buildings appears in the *Times* :—

I shall be obliged if, before it is too late, you will allow me to call the attention of the public, and of those specially conversant with the subject, to the contemplated refacing of the outside walls of Westminster Abbey.

According to a contemporary :—"The most extensive restoration that the exterior of Westminster Abbey has undergone during the long course of its history has now fairly commenced, and for several years to come workmen will be engaged in operations which, when completed, will literally have put a new face upon the greater portion of the Abbey. The work of erecting the scaffolding from the bottom to the top of the north transept is being rapidly accomplished, this being the first section of the Abbey with which it is intended to deal. After this part has been restored the work will be continued on the south side, and the east and west points will subsequently be taken in hand."

Another contemporary writes :—"At length it has been decided to make a thorough examination and restoration of the exterior of the Abbey, and with this object scaffoldings have been erected in some parts, preparatory to a detailed examination of the edifice, by Mr. Pearson, R.A., the architect of the Abbey. Until a careful survey of the edifice has been made it is impossible to prepare a scheme of restoration that will be followed throughout."

Now, Sir, there is one point upon which all must be agreed, namely, that it is of the most vital importance for the well-being of the Abbey that the right method should be adopted in any works which may be undertaken for its maintenance. The judgment of a living architect upon the work of Sir Christopher Wren in connection with the Abbey may well make that architect and others responsible for the contemplated renovation hesitate and ask,

What will be the judgment of posterity upon us if we do not ourselves pause in the moment of decision and reconsider?

In 1882, when the attention of the Society for the Protection of Ancient Buildings was first called to the proposal to reface the outside walls of the Abbey, a committee of the society, appointed to carefully examine and report upon the state of the fabric, reported that, in its opinion, repairs to the church generally, and particularly to the flying buttresses, were indeed much needed, as no one on seeing the state of the church could deny, and should certainly be undertaken at once in detail and with patient caution; but that any wholesale refacing similar to that which had been recently accomplished at the west end of the south clerestory would be fatal to what remained of the ancient masonry on the outside of the church, of which more remained than was generally known, and far from a wise treatment with regard to the stability of the fabric. The ancient masonry was doomed to disappear in time; but the action upon it of the weather and of London smoke was slow, gradual, and for the most part uniform, and it would be many years before this slow decay reached the substance of the walls. When it had so reached or nearly reached the substance of the walls, would be the time to effect the refacing; but to cut into and back through this facing now for the purpose of adding a solid new facing of stonework would be ruthlessly to anticipate the slow hand of Time, and in doing so to shake and impair the solidity of the structure as a whole. Moreover, the committee observed that where the walls had been already refaced, not only had the substance of the walling been shaken, but the new face had itself decayed, and the decay was advancing at a quicker rate than in the older portions of the building.

We cannot pretend to be acquainted with the plans which the guardians of the Abbey may have formed with respect to it, but if, as is publicly asserted, their plans do so comprise a wholesale refacing, then we beg of them, in view of the immense importance of their decision, to pause, though they have come to it, and once again, with the aid of other experienced opinion, to reconsider the matter. In the words of this year's annual report of the society, "In dealing with such a building as Westminster Abbey each original stone should be numbered and dealt with as a precious jewel." Once disturb one, and that mark of the hand of our forefathers, working in a spirit never to be matched now, has gone, and the mark is irrecoverable in all time to come. Time may, and ultimately will, deface all that man has done; but is that a reason why man should himself intervene and be his own destroyer before his time is ripe?

May the English people awake, and not allow the question of the maintenance of the ancient fabric of Westminster to be decided upon the opinion of one sole arbiter, who, however eminent, may in his turn, in time come to be thought to have been no wiser and not more prudent than Sir Christopher Wren.

## THE BERKSHIRE MEMORIAL.

A MEMORIAL is to be erected to the officers and men of the 66th (Berkshire) Regiment who were killed during the Afghan campaign of 1879-80. The commission was entrusted to Mr. George Simonds, the sculptor, and the work is now in a forward state. The life-sized model for the lion was completed at the close of last summer in the gardens of the Zoological Society. The clay model was then moulded in plaster and two casts were obtained, one of which was shown at the last exhibition of the Royal Academy—(No. 1776—*A Life-sized Sketch at the Zoo*). The other cast was cut into various pieces to suit the requirements of the moulders and foundries, and these pieces are now being enlarged to the colossal size required, previously to the process of casting in iron. The head, one hind leg, the tail, and the greater portion of the body are already reproduced on the colossal scale. As to the pedestal, that has in itself been a great labour, but it has been brought to a successful issue, and with the exception of one or two small pieces of ornament which are not quite finished, it is all stored away under the Reading Town Hall, until it is required for erection in the Forbury Gardens. The clay which was used for the terra-cotta blocks of which this pedestal is formed is the rich red clay from the pottery of Messrs. Wheeler Bros., at Coley, who gave Mr. Simonds every facility for the execution of the work, which was moulded in a workshop erected for that purpose at Coley, and fired in one of their kilns. The expense and labour attendant on this part of the work proved far greater than had been anticipated owing to the refractory nature of the clay, and the great amount of warpage in drying. These difficulties were, however, entirely overcome, and the blocks of terra-cotta are of a quality that leaves nothing to be desired, either as regards colour or durability.

Messrs. Clark & Moscrop, of Darlington, have been awarded the first premium and silver medal offered by the British Dairy Farmers' Association for the best plan of a model dairy farm steading. There were fourteen competitors.



## THE OLD INNS OF IPSWICH.\*

I NEED scarcely remind the present company of the important part that the ancient hostelrys have played in the history of our old towns, and I may say Ipswich is far from being an exception. The influence they formerly exercised on the life of the inhabitants must have been very great, while the actual well-being of the town may be said to have largely depended upon them. The position of Ipswich as an important maritime town, taking a front place in the trade of Mediæval times, and being a great centre for travellers, gave it an eminence and distinction shared by few towns of similar size, if indeed by any. The religious houses, with their different dependences, caused it to be the halting-place, if not the habitual resort, of a large number of people of almost every class, while as a great wool mart from which extensive exports were continually made, it brought together crowds of merchants and others. It follows as a matter of course that inns and taverns abounded at a very early period of the town's history. Social life, when Ipswich first sprung into being in Saxon days, was at a very low ebb, indeed about as unsociable a thing as it is possible to conceive. Added to the wretched accommodation that the poorer people were obliged to avail themselves of, the alehouse, with its irresistible attractions, greatly increased their sorrows, although apparently ministering to their necessities. In these early days, such houses were pretty numerous, and became the frequent resort of the people, and, too often, the scenes of such riot and disorder as to lead to regulations being enforced of a somewhat stringent character. Of course there is no positive evidence as to the number or character of the houses of this or a similar kind which at the time existed in Ipswich, but the foregoing evidence as to the high position held by the town at a subsequent period sufficiently warrant us in supposing that the number was by no means small, while in point of character it was probably neither better nor worse than the ordinary run of such houses.

At the outset it may be well to observe that there is a broad distinction between an inn and a tavern, although they have come to be regarded as well nigh synonymous terms. An inn is a very ancient institution, the history of which goes back to a very remote period, concerning which it is impossible to speak at all precisely. It is certain that there was a time when the inn did not exist. In the hospitable days of the heroic times, travels were never undertaken for commercial or other business considerations, and there was consequently no need of the inn. As its name implies, an inn is a house set apart for the accommodation of strangers, who for the time being find therein a home; but the tavern is really a place for the consumption, by the numbers who congregate there, of the wine and other intoxicating drinks sold by the taverner who keeps the house. The house was known to the ancients as the *oinothes*, or wine-shop; to us they continue to be known as ale-houses. Somehow or other the distinction has almost if not entirely ceased to be real, and both are now comprehended under the familiar and more generic term of public-house. Certainly houses of either class are more or less for the use and accommodation of the public; but when it is borne in mind that public-houses, as such, have, even from the very remote Roman period, had a sort of infamy attached to them (even to incurring certain disabilities) as well as to the persons who kept or frequented them, which is to some extent still the case, the larger term in its universal application is much to be regretted. But as in all else there have been frequent changes in public opinion, and the keepers of taverns have not unfrequently held positions of trust and importance in town affairs and stood high in the estimation of their neighbours. Although there are on record instances as early as the thirteenth century of taverners being returned to Parliament, it is more than probable that innkeepers have all along felt that the position was one of such peculiar difficulty as to cause them to abstain from seeking to occupy offices of dignity and authority. While the tavern has undergone but little change, it is quite otherwise with the inn. The monasteries were undoubtedly the chief inns of Mediæval Ipswich, and it was to one or other of these that travellers resorted for rest and refreshment while pursuing their journey. At an early period there were no lodgings in the usual sense of the word to be had, but both in the town and in the suburbs houses were to be met with in abundance which afforded temporary homes for such as would now be said to have no visible means of subsistence, as also for the huge class of itinerant musicians, jugglers, tumblers, ball-players, wrestlers, players, and other strolling entertainers who made frequent visits to the town.

Travellers of the better class would find no difficulty in securing a comfortable lodging with some one or other of the townsmen moving in his own condition of life, for which convenience the traveller would, on leaving the hospitable roof, render a recompense. An old poem, entitled "Floyre and Blunehfeur," published by the Early English Text Society, recounts the adventures of hero and heroine who, seeking each for the other, at length

To a riche city they bothe ycome,  
Whaire they have their inn ynome (*taken*).

\* From a paper by the Rev. C. H. Evelyn White, read at a meeting of the Suffolk Institute of Archæology.

And it proceeds to tell how at the house of

A burgess that was wel kind and curteis

first the one and then the other took up their abode, and in turn left, but Floris first receiving news of his beloved,

Took his leave and wende his way,  
And for his night's gesting

He gaf his host an hundred schillinge,

partly, it may be presumed from the amount, in gratitude for the welcome intelligence received in the inn. We have here an illustration that throws considerable light on the manners and customs of our forefathers, such as would frequently recur in former days in our own town. The far-famed shrine of Our Lady of Ipswich, which in Mediæval days did so much to make the name of Ipswich familiar, drew an immense concourse of pilgrims to the town who would need the accommodation afforded by the inn, and cause the number of the latter greatly to multiply. At stated times the number of pilgrims would be specially large, and make the finding of lodgings a rather difficult matter. Such persons on an errand of a similar nature would usually travel in companies and frequent the same inns, and continue throughout their sojourn in intercourse with each other. Erasmus, in his well-known colloquy, gives an account of a pilgrimage to the sister shrine in Norfolk, Our Lady of Walsingham, from whence a fragment of wood, said to be cut from a beam on which the Virgin Mother had been seen to rest, was obtained. The possessor of the relic being questioned as to whether he had made trial of the powers of the wood, replied, "I have; in an inn, before the end of three days, I found a man afflicted in mind for whom charms were then in preparation. This piece of wood was placed under his pillow, unknown to himself; he fell into a sleep equally deep and prolonged; in the morning he rose of whole mind." Chaucer's Canterbury Pilgrims sojourned at the sign of the Chequers, the host of the well-known Tabard, in Southwark, from which house they set out, acting as their leader.

We may from these instances gain some insight into an Ipswich inn and its surroundings under somewhat similar circumstances. But it was not until the middle of the fourteenth century that inns, at which travellers could obtain both food and lodging, were introduced into England, and not for some time after that were they to be met with except in the most important towns, of which Ipswich was certainly one. Previously men generally "used hospitality one to another without grudging"—indeed, it could be legally enforced; but then very few people travelled, and only upon most urgent occasions. The monasteries took the lead in entertaining strangers, setting apart for their special convenience what may suitably be termed "an inn within," otherwise known as the Hospitium or Great House, frequently a detached building. Here all things necessary for travellers were freely provided, and a monk, known as the hospitaller, attended to their wants. The parochial clergy, it must be added, according to their often scanty means, exercised hospitality with no niggard hand, not by any means confining their liberality to the rich and powerful. The foreign traders who came to Ipswich were subject to the most vigorous enactments, of a very arbitrary character, the result of a short-sighted policy, that generally hindered the growth of early commerce, and retarded the prosperity of the kingdom. One of these inconveniences—a slight one compared to many that were levelled against them—was the withholding from them the right of dwelling in their own houses, and living therein after their own manner. To meet the difficulty thus occasioned, resort was had to a class of men termed "hostmen," with whom the strangers lodged and boarded. Whether or no they were innkeepers in the strictest sense of the term I am unable to say. Their occupation was certainly not very dissimilar, but in addition they appear to have acted as brokers, although it was contrary to Henry's III.'s charter, which allowed no brokers, and were likewise required to take charge of their goods, and to transact business for them. Regulations for these hostmen are laid down in the Ipswich Domesday Book. The "Buttulerage Boke of Ippyswiche" contains the names of several Ipswich merchants who were charged with the customs of butlerage and priceage as importers, among other articles, of the wine of Gascony. It is obvious that the commodities of wine and beer were not only things of daily consumption, but that a large trade was likewise done.

From old pictures of Mediæval inns they seem fully to have kept pace in their architectural and such features with the prevailing styles. The courtyard was a necessary adjunct to a fully equipped inn, and generally there was an external staircase to the principal rooms on the first floor. No such ancient inn now exists in Ipswich, but side entrances communicating by a staircase from the courtyard with the upper apartments are, though far removed from their original condition, still to be seen. Of course the arrangements of a house varied greatly according to the locality and the requirements of those frequenting it. But as a general rule I believe I am correct in saying that the sleeping apartments, as also the dining and other such rooms, were shared in common by the visitors. Old engravings represent the beds placed side by side around the apartment, after the manner of a ship's cabin, offering probably less privacy and not fewer incon-



veniences. The furniture, &c., was of the simplest description and most limited extent, but probably sufficient for the requirements of an unrequiring age. The exterior was quaintness itself, as may be still seen, after a sort, in the old remains of domestic architecture, of which the town possesses still some fair examples—only we look upon the venerable gables and carved angle-posts with their many interesting details in a state more or less of decay, but once they were stately and grand in a congenial atmosphere. The hours that would otherwise have hung heavily were enlivened by song and story, and those who were accounted proficient in either art were, I suppose, in those days esteemed the people's best friends. It was at the inn that the farmer formerly met with purchasers for the corn, which he sold by sample. Here it was that the pedlar disposed of his wares, and generally the inn was used for similar purposes. Even on the introduction of the weekly market, which was obtained by a Royal Grant, the practice continued, and I suppose may be said still to exist, illustrating the well-known proverb, "Old customs die hard." Anyhow, the inn at almost every period of its history presented a picturesque scene of constant employment, with which we are not now very familiar, but our forefathers in Ipswich saw it under its most pleasant and interesting conditions.

At the early part of the sixteenth century, inns, taverns, and coffee-houses were to be met with in all parts of the town. Among the more famous hostelries were the King's Head, the George, the Griffin, the Assumption, the Tabard, the Turke, the Angel, the Dolphin, the White Horse, the Chequers, the White Lion, and the Crown. Of these the King's Head stood formerly in King Street, by the present Corn Hall. It had to the last a remnant of bygone days, in the spacious courtyard from which the coach started. In the thirteenth century the site, if not the actual house, was the "Sociary," to which the members of the Corpus Christi Guild retired for refreshment at the conclusion of the procession. The Griffin was a noted inn, and stood on the site of Messrs. Footman's premises, the Waterloo. Here it was, prior to the erection of the theatre, stage plays were acted (1736). A company under the patronage of the Duke of Grafton frequently performed here. The Chequers formerly stood where the Crown and Anchor now are. The sign is so ancient that it may be seen, it is said, on houses in exhumed Pompeii, in this character. Brand, in his popular antiquities, says that it represented the coat of arms of the Earls of Warrene and Surrey, who bore chequer or an azure, and in the reign of Edward IV. possessed the privilege of licensing ale-houses. But there is a far more likely explanation, which throws considerable light upon the usages of the Middle Ages. It was customary for merchants to use a counting-board, marked with squares, upon which counters were placed to facilitate arithmetical calculations. Such a board was used by money-changers to indicate their calling, and in process of time inn-keepers in certain cases, adding to their ordinary occupation, would use the sign. The centre of the town and neighbourhood of the market would account for the position of the house in Ipswich, and altered circumstances for the discontinuance of the sign. A house having a similar designation is still to be found in New Street, St. Clement's, in the neighbourhood of the Quay, which would be a favourable position for a house bearing the sign, but the house itself—a seventeenth-century structure—having an interesting exterior with carved gables, is a modern beer-house.

The Angel was a famous inn, situate on the Quay. It was a fine roomy old building, and said to have been a house of Cistercian monks, but I believe there is no foundation for this statement. It is now a malt-house. The Assumption is a remarkable sign for an inn. I am unable to say where it stood, or give any particulars. The White Lion formerly stood at the west end of the Mote Hall, where now is the Golden Lion—a dirty exterior was probably changed for a coat of gold. The White Horse has long held a principal position among the inns and taverns of Ipswich, and is known far and wide as a celebrated house. Long before Charles Dickens told of Mr. Pickwick's adventure in the house which had "elevated above the principal door a stone stature of some rampacious animal, with flowing mane, and tail distantly resembling an insane cart-horse," the house had a name. Several persons of note have stayed at the hotel, among whom may be numbered King George II. in 1736, and Lord Nelson in 1800. The aspect of the house is greatly changed from what it was in the early part of the present century, when it had its famous courtyard belonging to coaching days (coaches were advertised to start "if God permit"), while the front, which was of a somewhat unique appearance, extended some feet into the present street; but probably Mr. Pickwick's mistake has done more to raise the fame of the house than anything else. Early mention is also made of a house called the Three Cones. Gooding's Coffee House, which stood on the site now occupied by the chemist's shop at the corner of Northgate and Carr Streets, seems to have taken a high position as a house of entertainment. It was a curious old house, with much interesting carved work, notably a corner post, made familiar to us by the pencil of George Frost. Much of the ancient wood-work is reinstated in the Cliff Cottage and the adjoining house, belonging to Messrs. Cobbold. The military who were stationed here in such large numbers frequently had most sumptuous

dinners at the Coffee House, and it was much used for public and other meetings.

The Elephant and Castle, in the lower part of Silent Street, was a fine old Elizabethan mansion, which, previous to its conversion into an inn, was first the mansion of Lord Curzon, and was generally known as Lord Curzon's House, whose name, previous to its final destruction, was to be seen in the rebus on the old wood-work of a back gate in Silent Street. The house afterwards came into the possession of the Bishop of Norwich, it having been granted for his use in the reign of Edward VI. During the Dutch wars in the latter part of the seventeenth century, it was used as an hospital for those who suffered in the sea engagements, or from other sickness. The house was for some time afterwards used as a malt-kiln. Its best remembered feature was a stately porch built of red brick, which projected some way into the street, and beneath which vehicles used to pass. In 1517 Henry's queen Catherine of Arragon stayed in this house, and the king himself slept here when he visited Ipswich in 1522. A famous inn in former days was the Mitre Tavern, standing in Tavern Street, at the corner of Dial Lane (formerly Cook Row), where Mr. Hunt carried on a bookseller's business, and now occupied by some handsome shops erected by Messrs. Meadows & Bennett. It is on this site that the Subterranean Chapel, known as St. Mary Magdalene's, formerly stood. Beyond a groined roof and two Early English doorways, one of which probably communicated with St. Lawrence Church and the other with a vault further down Dial Lane, there were no other remains. Apparently a greater part of this underground structure had been utilised by the former holders of the Mitre; a number of broad-vaulted arches of massive brickwork, of some feet thick, were evidently put together with mortar such as would have been used two hundred years ago. A drawing of this chapel was made soon after its discovery in 1846, and is now to be seen among the Fitch collections at Bury. Its existence, however, was scarcely known until the recent excavations on the premises. In St. Lawrence Street formerly stood the White Hart, an inn of much renown. It was at the east end of the church, leading from Tavern Street to the Butter Market. It was a great posting-house, having a picturesque entrance gateway of an antique character, the spandrels of which were ornamented with the well-known dragon. Near the last-named house, adjoining the noted Ancient House of Sparrow's on the west, stands the Waggon and Horses, which under the same or a like designation—it was called the Waggon somewhere about 1567—has been an inn for upwards of three hundred years at the least. This leads me to observe that signs were formerly selected with a more real application to the immediate surroundings of the neighbourhood than seems to be the case now, and as far as I am able to discover all the old inns and taverns of Ipswich bear me out in this assertion. The Old Butter Market, or Fish Market, as this part seems anciently to have been termed, witnessed many a busy scene, the unloading of many a waggon with produce of every description.

## BUILDING IN STOCKHOLM.

MANY beautiful buildings have lately been erected, and the quarter of the town called Villastaden is rapidly growing and becoming the favourite residential quarter of Stockholm. Situated between the Humle Garden, one of the most beautiful parks in Europe, and the stretch of primæval forest that lies to the north of Stockholm, and with broad, handsome streets, it is not surprising that this part is attracting people from the older parts of the city. A short railway to run round the city, and terminating in a station in this quarter, will soon connect Villastaden with the central railway-station, and will give the public yet further advantages, in addition to the little steamers that ply over all the arms of Lake Mälär and the circular tram lines, in the way of locomotion. Building is very difficult and expensive. Some houses are erected on a foundation of piles, which are slowly driven in by means of a weight which has been lifted by manual force. Others are placed on ground which has been prepared by the blasting away of the primary rock which here forms the surface of the country. Wherever building is going on dynamite explosions are constantly heard, and the ear soon becomes familiar with the low, dull, rumbling sound. The workmen have complete control of this destructive agent, which heaves up masses of rock without hurling about small fragments in a dangerous way. The telephone is more employed in Stockholm than in London. Shop-keepers place it at the convenience of customers. All business houses employ the telephone freely. The hotels communicate with one another and with the houses of business.

Mr. John Heywood will shortly publish a new map of Greater Manchester, scale 6 inches to a mile, showing all roads, streets, houses, and other buildings in the parishes of Manchester, Eccles, and portions of Ashton-under-Lyne and Stockport, from surveys recently completed over an area of upwards of 150 square miles, containing 38 townships.



THE INTERNATIONAL HEALTH EXHIBITION.

WITH the exception of the list of awards, when they appear, we now present our readers with the last descriptive account of the exhibits that we intend publishing. Large as the exhibition is the exhibits that come strictly within our province to describe are not so many as may be supposed, and of those on view many are of a character that do not need remark. We are now within comparatively a few days of the time fixed for the close of the exhibition, and although the numbers of visitors during the past few weeks have shown a higher average than during the height of the season, it must be confessed that "a day at the Healtheries," apart from the unsettled weather, is not such a pleasurable "outing" as it was two or three months back. The owners, too, of some of the most interesting suites of apartments, find it necessary to partially close them, and to restrict the walk through to a mere passage by putting up ropes. In organising excursion trains from all parts of the country, at fares that it would scarcely appear could pay any one but the executive of the exhibition, the authorities have "tapped" almost the lowest strata of society, a class, too, of little or no use to the exhibitors. With fares at two shillings for any distance within 50 miles, and two shillings and sixpence for 100 miles, including, in many instances, the ride by the underground railways, as well as admission to the exhibition, the share of each corporation to these "handsome" sums of money must be very small, and the class of people who wander through the galleries with vacant stare and no fixed purpose, save to eat, drink, and smoke (where it is allowed), may be well imagined. When the total of visitors to the Healtheries is announced, it will doubtless be put forth as showing the interest all classes have taken in the display, but we may ask if it had been bereft of the music and illuminations what would have been the result?

Manufacturers and Millowners' Mutual Aid Association.

Among the independent buildings, one situated north-east of the south gallery contains exhibits of a very interesting and important character. It figures in the catalogue as Stand No. 1,081, and is occupied by the MANUFACTURERS AND MILLOWNERS' MUTUAL AID ASSOCIATION, and their object is to demonstrate by models and plans the process adopted by them for purifying rivers and streams that receive the refuse from various works, such as paper mills, glue and gelatine manufactories, &c. Samples of water before and after purification are shown, as well as certain valuable products recoverable therefrom. Owners and also operatives of such works would do well to make themselves acquainted with the remediable processes introduced by the Association, who also afford assistance for applying the same. They have offices at 5 The Sanctuary, Westminster, S.W., and are in a position to apply their remedies to samples of polluting matter, so that the probable cost and actual results may be ascertained before any expenses are incurred.

The Native Guano Company.

Adjoining the above, at Stand 1,082, THE NATIVE GUANO COMPANY have an exhibit of a somewhat similar nature. They more than the latter firm make the treatment and purification of sewage their special feature; and here are also to be seen models and plans illustrating what is known as the A B C system, for which, amongst others, they claim the following noteworthy advantages:—(1) That the effluent water is sufficiently purified to be admissible into any river within the requirements of the Rivers Pollution Prevention Act, and without injury to fish; (2) that it is effected without nuisance; (3) that no material is used which injures or destroys the valuable manurial qualities of the sewage, which are consequently preserved for agricultural use. The *modus operandi* is as follows:—The sewage is received into tanks, and in its progress through them undergoes its purification, the liquid portion running out directly into the river without requiring filtration or further treatment. As the sewage enters the works, the "A B C" mixture is added to it, which acts so definitely upon the dissolved as well as the suspended impurities, as instantly to precipitate them, allowing the purified water to run off to the nearest stream or river. The addition of the "A B C" mixture also has the very desirable effect of at once arresting all offensive odour, and this freedom from nuisance is certainly not the least of its advantages. The deposit or residue is pumped from the tanks periodically, when it is deprived by pressure of its superabundant moisture, and further dried by artificial heat till it obtains the consistency and appearance of dry earth. It is then ready for market as "Native Guano."

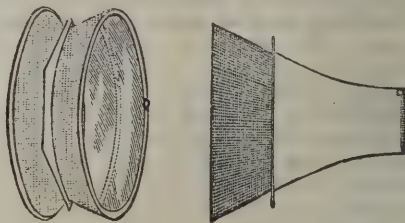
Messrs. Underhill & Co.

In the grounds at the back of the dairies, Messrs. UNDERHILL & Co., of Upper Thames Street, have erected a substantial one-floor building, in which they exhibit a good assortment of kitcheners, stoves, grates, &c., amongst which will be found some objects of interest. The white bricks used in this building were contributed by Messrs. Charles Hooper & Co., the Exbury Brick Works, near Southampton, and the red roofing tiles, ridges, and stringcourses by the Bracknell Brick and Tile Company, Bracknell, Berks, the building itself having been erected by Mr. W. Harper, Oxford

Street, Stepney. Messrs. Underhill have recently added the manufacture of marble mantelpieces to their already extensive business, and have opened extensive works at the Triangle, Mare Street, Hackney. They show several attractive and inexpensive samples of their work in this new addenda, well worth the attention of the architect and builder. There are two new tile grates, named the "Surprise" and the "Margravine," notable for their low price and genteel appearance. Another new one of semi-Abbotsford character has been named the "Desideratum," and will no doubt receive a good amount of patronage, as it is both artistic and economic, and a minimiser of smoke. The fire-basket, which reaches nearly to the ground, has an opening at the bottom through which the cold air enters, and, passing along to the back, rises, and is discharged through openings amongst the burning fuel in a heated form, promoting combustion, and consequently reducing smoke. But the greatest novelty in grates is undoubtedly the nursery grate, called the "Nightingale," and which only requires time for it to be known to meet with a large demand. This is grate and mantel in one piece, with an open fire (straight flat bars), with double doors above, which act as a blower when closed. Above this is an oven of good dimensions, opening with double doors, and flues carried around it in the ordinary manner. This oven will either bake well or keep anything warm according as the heat is distributed, and gas is laid on underneath for use when a fire is not required. A high-pressure boiler is also fixed at the back, sufficient to supply water to the bath-room, or other purposes. The whole is very compact, and a more perfect arrangement for a nursery it would be difficult to carry out. A good kitchener, called the "Lawrence" or "Health" range is also shown, the hygienic feature being the mode of ventilation adopted. This consists of an exhaust ventilator (Wintour's system) described below, somewhat of the shape of the letter T, which collects all the fumes generated in the ovens, and from the vessels on the hot plate, and, creating a suction, discharges them into the chimney. Fresh air is admitted to the ovens from the front, consequently there is good ventilation constantly kept up, as in a well-ventilated room. Wintour's mode of ventilation differs in certain of its phases from all others now before us, and is arranged both as inlet and outlet, and for all kinds of buildings. Fig. 1 (side view) shows the Universal ventilator for windows or walls, where access can be

Fig. 1.

Fig. 2.



Side View.

obtained to the inner atmospheres. It may be described as two truncated cones, made of finely-perforated metal, covered with glass on each face. One of these cones is inside and the other outside the room, and the atmospheric action being sideways, it is claimed that it acts both as an inlet and outlet, and that from whatever point the wind blows the current is broken up by passing through the small orifices of the perforations, and that the fresh air entering is, so to speak, filtered ere it enters the room, and that ventilation without draught is secured, and that the change of atmosphere, though constantly going on, is imperceptible to the occupants. These ventilators have been fixed in the office of the postal telegraph at Southampton, a room occupied by thirty-seven operators, and the following tables show the results as taken on three days in June last, and it may be added that at 9.30 p.m.

	June 23.			June 24.			June 25.		
	Inside.	Outside.	Out N.	Inside.	Outside.	Out N.	Inside.	Outside.	Out N.
9.30 A.M. ....	70	75	67	69½	69½	65	71	71	66
12 Noon.....	71	84½	70	70	82	63	70	83	70
4 P.M. ....	75	79	73½	73	75	69	72	98	76
9.30 P.M. ....	—	—	—	73	70	67	70	69	65

from fifteen to twenty-five gas-lights were burning. The tables show that in most instances during the daytime the inner atmosphere was less than the outer, and that it was only after the gas was lighted that it exceeded it by a very few degrees, which is not likely to create surprise. We may admire this in summer, but we presume the inmates of a room would not desire to have the warmth so reduced in winter; and if the same deductions hold good in cold weather, means must be taken to warm the incoming air. But it is perhaps doubtful



if so close an approximation would be obtained, seeing that the gas would be burning so many more hours. Fig. 2 is an exhaust ventilator for chimney-shafts, to be fixed about one inch from the ceiling, and has also a finely perforated face. This is also particularly recommended for kitchens. Fig. 3 is an exhaust for the

Fig. 2.



Fig. 3.

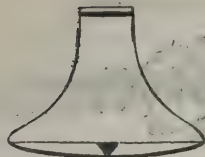
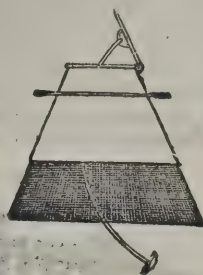


Fig. 4.



ceilings of public rooms, &c. It has a gas-jet in the centre, and is connected by a shaft with fig. 5, which has a flap valve on either side of the mouth (this is of the same pattern as that mentioned for kitchens) to prevent back draughts, and fig. 4 has been constructed for hothouses, or to be used in connection with the outlet (fig. 5). Although the system is comparatively new, it has been fixed in many buildings, both public and private, and we understand satisfactory testimonials have been received. Economy in price is also claimed for it; and it is evidently a novelty in ventilation that is worth careful investigation.

#### Messrs. J. Watts & Co.

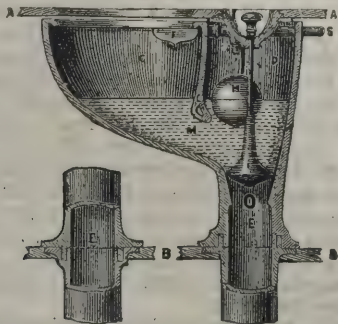
At Stand 474, Messrs. J. WATTS & CO., Broad Weir Works, Bristol, show a useful apparatus, the primary object of which is to apply the smoke-test to drains. We append a sketch of it, a



glance at which will at once testify to its simplicity. The ease with which it is manipulated, combined with the efficient manner in which it works and its extreme portability, have secured for it universal approbation. Various media may be used in it, such as tobacco paper, sulphur paper, &c., and for drain testing the fan is powerful enough to make the fume penetrate a great distance, while for disinfecting bedding and rooms it affords a safe and easy method.

#### Messrs. Capper, Son & Co.

The accompanying cut represents Pearson's patent "Twin Basin" closet, which is exhibited at Stand 540 by Messrs. CAPPER, SON & CO., Ingram Court, Fenchurch Street, E.C. It has now been before the public for some time, and is doubtless known to

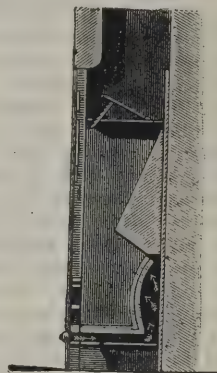
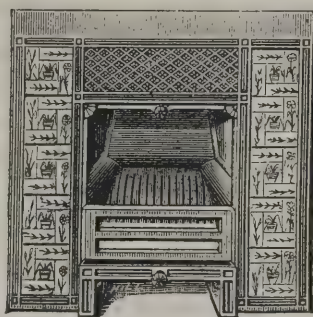


most of our readers; but despite the many improvements that have been made in, and the new patents that have recently been taken out for this class of apparatus, the demand for the "Twin Basin" still keeps very active. The salient features of it have been pointed out on other occasions in the columns of *The Architect*, but we may mention that owing to the extreme simplicity of

construction, which the sketch makes quite apparent, and absence of complicated mechanism, the liability to get out of order is reduced to a minimum, while for cleanliness and protection against foul air from the sewer it will bear comparison with anything of its kind. The firm show a variety of other sanitary appliances, the most noteworthy being a folding lavatory, especially designed for use where space is of importance, as, for instance, on board ship, in railway carriages, libraries, &c.; Wentworth's floating water-heater, by means of which a warm bath may be readily and quickly obtained by merely placing it with a piece of flexible gas tube attached into the water until it is raised to the required temperature; and their pivot high-pressure water filter for fixing on to the nozzle of an ordinary tap, enabling the water to be drawn from the main as required for use, cool, fresh and pure.

#### Messrs. Brown & Green.

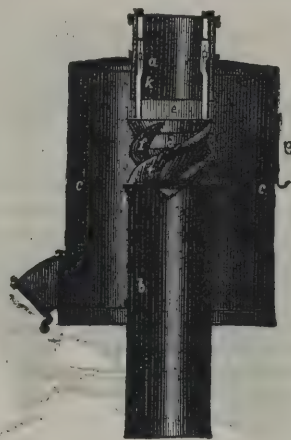
At Stand 631 Messrs. BROWN & GREEN, Limited, Luton, Beds, and Finsbury Pavement, E.C., are situated. This firm, it will be remembered, were awarded the gold medal at the Smoke Abatement Exhibition for their "Underfed" sitting-room grates and kitchen ranges, upon which occasion they were described in the columns of *The Architect*. They have recently entered the lists with a sitting-room grate on quite a different principle, and to this we now call attention. It is termed the "Finsbury," and illustrations are appended. It has the advantage of being capable of



alteration to a quick or slow-combustion grate at pleasure. The back is grated, and above is a solid fire-brick, the bottom also being formed of the same material. Situated a little space below the latter is a plate that forms with it a hot-air chamber. This chamber is so arranged that by drawing the plate slightly forward or pushing it backward it opens or closes communication at the back to the grated chamber before mentioned. This results in a slow-combustion fire, and by opening the chamber a flow of heated air is carried along to the back, where it is discharged through the gratings into and over the fire, and has the effect of minimising the production of smoke.

#### Mr. Schomburg.

In the Foreign Department, west central galleries, Mr. SCHOMBURG, 12 Buckingham Street, Strand, is showing an apparatus termed a "Soot and Spark Arrester," designed for the abatement of smoke, and constructed in accordance with experiments carried out by Dr. Werner Siemens, who has demonstrated that the sparks



and soot of fires can be separated from the smoke by mechanical means. From the above sketch it will be seen that in appearance it is somewhat like a chimney-cowl. The two cylinders *a*, *b*, placed one above the other, and some distance apart, are in diameter about the same as the chimney required to be fitted with it. Between the two cylinders an inverted cone *d* is placed, so that a circular space *e* intervenes the upper edge of *b* and the lower edge of the cylinder *a*, through which the smoke escapes. To this cone are attached four spiral blades *f*, which deflect the smoke rising up through cylinder *b*, and cause it to move in a



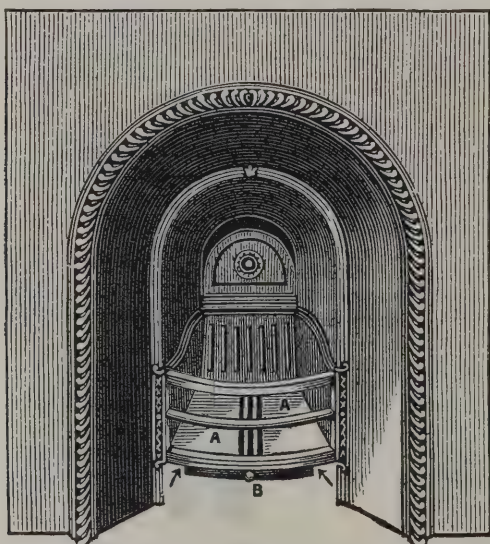
circular path round the cone. By this means the solid particles suspended in the smoke will be thrown by centrifugal action into the outer casing or chamber *c*, where they become deposited. For cleansing the apparatus, the cone is drawn up until it closes the lower end of the cylinder *a*, where it can be secured by means of a



chain and pin. The soot can then be removed by introducing a brush at the opening *g*, and collecting it in a receptacle placed to receive it at the knee-shaped tube *k*. A Woolport cowl, as depicted in the accompanying cut, may be fixed on the cylinder for preventing the entrance of rain, &c., and increasing the draught.

Mr. Robert E. Cox.

It is only by an occasional report, or information vouchsafed at a public meeting, that we hear of the progress that the Smoke Abatement Exhibition are making. But after all it is to private enterprise or that of our manufacturers to whom we must look for those improvements in domestic grates, calculated to arrest the evil. Until very recently the grates claiming to reduce smoke have been of too high a price for us to hope that they could ever come into general use. But a few days' since the writer was in conversation with a leading firm of stove-grate manufacturers, who are patentees of a speciality bearing on the question, and complaining of the high price, was met with this rejoinder, "When the public take a real interest in the question that will warrant us in manufacturing on a large scale, we shall be enabled to reduce prices; but with the comparative indifference now existing, we must be content to go on as we are." This opens up the idea that grates must be made that reduce smoke and that will do so automatically, and that can be sold at a price that will induce builders to fix them in place of those now used. We have, during our remarks on this exhibition, alluded to and illustrated a grate being exhibited of Mr. Thompson's, that goes far to meet the requirement, and we may now mention another of a somewhat different type, the invention of Mr. ROBERT E. COX, architect, 330 High Holborn, that as far as price goes is but a trifle in excess of that of the commonest register. Mr. Cox's patents combine two features, the making of a cheap grate, and the conversion of existing ones of any quality at the cost of a few shillings to his principle, without removal, and in either case the grate will burn coke much brighter and without sulphur fumes, anthracite coal, or bituminous coal. In burning the two former smoke is of course not generated at all, and in the latter the volume of smoke is considerably reduced. Our illustration will enable the principle to be easily understood. The grating of the fire basket is made solid,



with the exception of about three bars in the centre, and under the grating a solid plate *b*, covering a large part of the bottom, is slid in, about one inch below. The oxygen to promote combustion has consequently to pass in the direction of the arrows, between the sliding plate and the bottom of the grid, when it becomes heated, and enters the burning fuel through the narrow opening before mentioned, in a highly-heated state. As this takes place on each side of the fire the two currents virtually assist the circulation of the heat, and tend to keep up a

regular condition of combustion in the fire. Thus we have a hot blast working in the centre of the fire, which communicates itself to the fuel at the sides, subjecting it to great heat, and bringing the whole to a bright red. As there is no current of air at the sides, the heat from this part of the fire has less tendency to rush upwards, and it is mainly absorbed by the solid bottom and given off into the apartment, and at the same time a higher ratio of combustion is secured, producing, in the case of bituminous coal, less smoke. This combustion in the fire itself does away with the necessity of the usual wide opening in the register, which only requires to be slightly thrown back to allow the escape of exhausted air. We think Mr. Cox may be fairly complimented upon his invention, and he can claim to have introduced the cheapest grate, burning any kind of fuel economically, and with a reduction of smoke, as a 36-inch register can be sold to bear the usual trade profit at ten shillings and sixpence.



All Souls' Church, Harlesden.

SIR,—Your correspondent's notice of All Souls' Church, Harlesden, gives me the opportunity of pointing out that this building, in its present state, should be contemplated as a trunk without either head, arms, or legs, or even skin, for the bare bones of the octagon roof are not yet clothed with their intended ceiling.

Great praise is due to the vicar for having brought the work so far, while the local funds have been sapped by the building of two Wesleyan and one Presbyterian chapel. He is now endeavouring to complete the apse with its lofty walls and flanking stair turrets, a composition suggested by many Rhenish churches.

In the place of the nave and aisles, I have aimed at the finest effect that I can conceive a church to be capable of, namely, that of leading towards a vast space which seems to expand as one approaches nearer and nearer, revealing a processional *Te Deum* depicted around the walls, all those with whom the Church is in communion facing towards the altar enshrined in a lofty apse; while the choir, standing well forward amongst the congregation, lift their voices in concert with them and with the surrounding throng of angels, apostles, prophets, martyrs, and the rest of the Holy Church.

Your obedient servant,  
EDWARD J. TARVER.

The Decoration of the Dome of St. Paul's.

SIR,—Several weeks having now elapsed since the cartoons for the proposed decoration of the dome were fixed *in situ*, I venture, if you permit, to state very briefly my impressions of them, mainly in the hope that it may induce others more competent to record theirs. Doubtless the committee will be glad to hear opinions, as their present object is, probably, to ascertain what corrections of the cartoons are necessary. In this country artists have so little experience in this class of work that error at starting is quite pardonable. Having paid three visits to the Cathedral for the special purpose of considering them, I am sorry to say that my impressions are unfavourable. I think too much is being attempted upon the space at command, large though it is, and that the scale has not been fixed with sufficient regard to the point of view—the floor below; and I think the deficient light—reflected light only—has not been much considered. This is a case of optics, of science as well as art. It is not an occasion upon which there is no experience to guide us. There are the mosaics of the tribunes of the Roman churches, where large scale and simple treatment are striking and impressive characteristics; and the many Italian cupolas, within which such artists as Raphael, Guido, and Correggio laboured to fix a scale and treatment bold and simple enough for the special purpose. The wonderful foreshortenings of the last-named painter, at Parma, somewhat exaggerated though they were, created a school of admiring imitators. The dome of St. Peter's, in Rome, is treated in a manner more simple than is proposed for our St. Paul's, although it is nearly twice the size. There are no pictures with three or more figures, the experience of the artist having taught him that they are liable, if not certain, to become indistinct and confused at so great a distance from the spectator. On the contrary, the compartments at the great Vatican basilica are of very simple arrangement themselves, and are filled with simple figures of the Saviour, the Apostles, and angels in four zones. Thus simplicity, distinctness, and grandeur are the result.

The suggestion has been made that visitors to the cartoons at St. Paul's should ascend to the whispering gallery if they desire to see them properly. This is true, but of itself is sufficient to condemn the present designs, which are so small in scale that they cannot properly be distinguished from the floor below—the only proper point of view.

It would be a thousand pities for the time and labour of men of



such artistic power as Sir F. Leighton and Mr. Poynter to be all but wasted upon work intended to be executed in everlasting mosaic, but which will be almost invisible except from a troublesome and difficult standpoint. Under these circumstances, I venture very humbly to think that in our London dome the sham imitative architectural framework should be very much reduced and simplified, so that the size of the figures may be largely increased. If in these latter a more archaic treatment could be combined with academic skill, so much the better. And I am strongly inclined to think that this idea would harmonise better than the present proposal with the general simplicity of Wren's architecture—a consideration of very great importance. Apologising for speaking somewhat plainly upon a delicate and very difficult subject,

I am, yours faithfully,  
AN OLD ARTIST.

### WORKS IN PROGRESS.

**Some Extensive Alterations** have been going on for some months past in the greenhouses at The Holm, Regent's Park, London, one of the large houses in the Inner Circle. The vineries, plant, and storehouses, fernery, &c., have been rebuilt and entirely reconstructed on Messenger & Co's, of Loughborough, patent system of construction, which, broadly speaking, consists of a judicious combination of wood and iron, to give the greatest amount of rigidity, and to admit the largest possible amount of sun and light, a vital point in all greenhouse building, but more especially so in London, where smoke and fog have to be contended with. Every precaution has been taken in the glazing and general construction to afford as little harbour as possible for London soot in the roofs and fronts of the houses. A year or two before the present works were taken in hand, a house on a well-known dry glazing system was erected, but the result was not such as to warrant the remaining houses being reconstructed on the same principle, and after a careful comparison of the various and numerous systems of glazing in vogue, Messrs. Messenger's system was selected as best suited to greenhouse work, where it is so important to obtain a wind-tight as well as a water-tight roof. In this range of glasshouses, all the most recent improvements in the way of ventilating apparatus for opening the lights simultaneously; fittings, such as the beds and stages, which are of iron and slate, and perfectly imperishable, and heating apparatus with Messenger's patent elastic-jointed hot-water pipes have been introduced. The joint in Messenger's patent pipes is made by means of a flat elastic ring compressed between the socket of the pipe, and a loose iron ring which is bolted to the pipe, and possesses the advantage of being perfectly rigid when screwed up. We are informed it can be put together in a quarter of the time of the old-fashioned caulked joint, and must consequently be an economical method of fixing.

**The Church of St. Philip's, Birmingham**, to which a spacious chancel has recently been built in harmony with the original structure, has been fitted with handsomely-carved oak choir stalls, designed specially to suit the Classic architecture of the building. The whole of the work has been carried out, under the immediate supervision of the architect, by Messrs. Jones & Willis, of Birmingham, who also made the wrought-iron communion railings. This firm have also completed an elaborate pulpit in oak and iron for the same church.

**The American Elevator Co.**, 38 Old Jewry, E.C., have just completed the erection of one of their "Standard" hydraulic lifts in the Jervis Street Hospital, Dublin. The Council of the hospital have written to the company expressing their "complete satisfaction."

### CHURCH BUILDING AND RESTORATION.

**Hunslet.**—The church of St. Cuthbert was consecrated on Sunday. It is in the Early Pointed style, of fine red brick, with stone dressings and terra-cotta enrichments. The plan has been arranged to meet the contracted nature of the site, which is a short parallelogram. It consists of a nave, with clerestory, choir, sanctuary, and north and south aisles. The choir is raised four steps above the nave, and is enclosed by a low stone wall. The sanctuary is raised one step above the choir floor, and the footpace to the altar two steps above the sanctuary floor. The vestries are entered from the north aisle, at the east end of which is placed the organ chapel. The entrance porch is in the south aisle, entered from Kirkland Street, and is separated from the body of the church by glazed screens with swing doors. There are two external doors, both opening outwards. The seats and choir stalls are finished in a dark chocolate colour, and the roofs are of pitch pine unvarnished, with boarded ceilings, and covered with light green Westmoreland slating and red Staffordshire ornamental ridge cresting. The floors throughout are laid with marble mosaic concrete. The heating is by low-pressure hot-water apparatus, and the lighting by gas jets arranged along the clerestory. The pulpit is of Caen stone, with carved work of diaper pattern and angels supporting the book-rest. It is carried on a base of blue stone.

The font is a circular bowl of solid alabaster on a base and steps of blue stone, and is enriched with blue stone and alabaster shafts with moulded caps and bases. The church will seat 500 persons. The architects are Messrs. Perkin & Bulmer, of Leeds.

**Kidderminster.**—Memorial-stones, in connection with the rebuilding of the Old Meeting House, Kidderminster, have been laid. The plan of the building is a parallelogram, with an apse at the north and main entrance at the south, and it is proposed to have a tower and spire erected at the south-west angle, rising to a height of 140 feet. The style is Early Decorated Gothic, and the materials to be used are Alveley red stone for the facing, relieved with Bath stone, and internally with stock brickwork, relieved with Portland cement stucco. Mr. Tarring, of London, is the architect, and Mr. R. Thompson, of Kidderminster, the builder.

**Mercers' Chapel, London.**—This chapel having been closed for some months for repairs, was reopened for service on Sunday, October 5, a short opening service having been also held on the previous Friday. The chapel has been refloored and resealed throughout with carved oak stalls and seats, new choir-stalls, prayer-desk, and pulpit; the organ has been rebuilt and enlarged, and all the walls and the ceiling have been painted and richly decorated in gold and colours, and the sanctuary wall enriched with three frescoes by Mr. Newman, the large centre one being a representation of the Ascension, and the two side-panels respectively, the *Martyrdom of St. Thomas à Becket*, to whose memory the original chapel was dedicated twenty years after his martyrdom on the site of his birthplace; and the *Donation of the land to the Mercers' Company by his sister*. By the reseating the accommodation has been nearly doubled. The works have been carried out under the direction of Mr. J. K. Colling.

**St. John's Wood, London.**—The church of Our Lady, Grove Road, was the first Roman Catholic church built in London after the Emancipation Act, and one of the first Gothic churches of the revival, the contract drawings being dated October 1832. It was designed by the late J. J. Scoles, F.R.I.B.A. The church was reopened last Sunday, October 12, after a thorough repair. A new stone and alabaster altar has been erected, with a very rich reredos of novel design. It is of the entire width of the nave, and rising so as to form an architectural composition with the large triple lancet window. It is contrived so as to occupy the whole thickness of the wall, with pierced traceried openings to a staircase and passage behind for access to the throne used in the rite of Exposition. The floor of the sanctuary and chapels has been laid with parquet work. The whole of the works have been executed by Mr. Anstey, from the designs and under the superintendence of Mr. S. J. Nicholl, who was a pupil of Mr. Scoles.

### SCHOOL BUILDINGS.

**Warrington.**—Extensions have been carried out at the Grammar School. The work has been executed by Mr. Gibson, builder, from the plans of Mr. William Owen, architect, of Warrington. The sub-contractors were—Painting, Mr. Hedgecock; heating apparatus, Mr. Proctor Jones; stonework, Mr. Gittens.

**Hartlepool.**—The foundation-stone of a new Sunday-school, in connection with the Wesleyan chapel, has been laid in South Scarborough Street, and the new building will be practically an extension of the old school, which has been found inadequate for the requirements of the Musgrave Street body. The plans have been prepared by Mr. Dumpace, architect. The schools will accommodate about 450 children, 144 on the ground floor, and a little over 300 in an upper apartment, which will also be used as an assembly room.

**London Board Schools.**—There are now in London 367 Board Schools, accommodating 328,683 children. Of these, 289, accommodating 302,674, are now permanent schools built by the Board; 30, accommodating 15,297, have been transferred; and 48, accommodating 10,712, are temporary feeders to projected permanent schools. Of the permanent schools 14 have been added since the beginning of last October, accommodating 15,898 children, and additions to schools which were found inadequate have been made to the extent of 5,451, making a total of 21,349 school places added during the year. This is rather a low record. Nevertheless, the year has been one of great activity in the architect's department, for 37 contracts for new schools, and 17 for enlargements have been entered into. Twelve months ago the Board determined that additional accommodation was necessary for the proper discharge of business, and that the offices of the Board should be at once enlarged. The delay in carrying this into effect was due to the hesitation of the Board with regard to the question of the "Stores." When it was decided that this department could not with advantage be separated from the other offices, the work proceeded under the direction of Mr. Robson. The additional building, which covers about one-half of the site acquired some years ago, will be flush with the front of the present offices, and will fill the space between that and the new buildings erected by the Duke of Norfolk. It will be chiefly occupied by rooms for the staff, which is now about double in



number what it was when the original offices were built. One large committee room and some further general accommodation will be provided. It is expected to be ready for use in the course of next spring.

### NEW BUILDINGS.

**Glasgow.**—The new premises of the Glasgow Medical Missionary Society have been opened. The building is situated at the corner of Oxford and Buchan Streets. The accommodation provided consists of a hall, in which the meetings connected with the mission work will be conducted; adjoining the hall are the medical officer's consulting-room and the dispensary. A room is provided for visitors or lady workers, and there are also rooms for the caretaker. The premises are conveniently arranged and well adapted for these purposes. Special attention has been given to the heating, ventilation, and sanitary appliances. The walls of the hall and passages are lined with white enamelled bricks, and the floors are laid with narrow pitch pine boards and tiles. The hall has been tastefully decorated in quiet colours, and appropriate texts are inscribed in panels on the walls. The total cost will be about 2,000*l.*, besides 1,000*l.* for the site. Messrs. Campbell Douglas & Sellars are the architects.

**Hull.**—The Hull General Infirmary is about to be enlarged by the addition of two wings, and the erection of an out-patients' department. The architects are Messrs. H. Saxon Snell & Son, and the builders are Messrs. Jackson & Son, of Hull. The cost of the whole work will be about 25,000*l.*

**Mission Hall, Leeds.**—A Mission Hall was opened in Bismarck Street on the 11th inst., which has been erected from the design of Messrs. Adams & Kelly. The plan consists of large hall, 50 feet by 27 feet, with parochial room, 27 feet by 19 feet. Under the parochial room is a store-room, heating-chamber, &c. From the parochial room a staircase leads to the basement, which is fitted up as a kitchen, &c. The building is of red bricks, relieved with ornamental brickwork strings and labels, and is divided into bays, each bay being pierced with coupled lancet-headed windows. In the large gable is a four-light window. The gables have brick coping and moulded strings, and are surmounted with floriated stone crosses. The roofs are covered with dark Westmoreland slates, having bright red ridge roll. Internally the walls are plastered, and relieved with ornamental brick dado and bands. The windows internally have brick quoins, sills, arches, and label moulds, and are filled in with cathedral-tinted glass with dark-tinted border. Each window is fitted with hopper casement, so arranged as to admit air without draught. The roofs are open-timbered, having wrought principals with curved braces resting upon moulded corbels. Messrs. Longley were the builders.

**Newcastle-on-Tyne Infirmary.**—The foundation-stone of the new infirmary was laid on Monday. The buildings are to be Renaissance in style, the materials being red bricks and Dennich stone, with green slates to roof. The principal front is towards St. Mary's Place. The main entrance will be emphasised by an open porch with moulded columns supporting arches, above which is a projecting oriel window with balustrade parapet over. On either side the window, with mullions and transoms, are enriched stone pilasters with moulded caps and cornices, the whole surmounted by ashlar pediment and pedimented dormers connected by balustrade arcade. The main entrance will divide the ground floor into two parts, that to the east to be occupied as the administrative department, that to the west the out-patient department. The out-patients' entrance and exit are apart from the main entrance, and the apartments to which access is given are so arranged that the out-patients take up their position in order as they arrive, proceed to the consulting room (with special dark room off), and then to the dispensary waiting-room, passing through in the same order, and out of the exit door, without retracing any part of the route. On the upper floors the wards for in-patients will be provided. Projecting from the main buildings an operating-room and day-room are in connection. From the day-room access is given to an ambulatory for exercise, the roofs over some single-storey buildings being laid flat for the use of patients. Nurses' sitting and bedrooms will occupy the remainder of the buildings. The works have been designed and are being carried out under the superintendence of the architects, Messrs. Newcombe & Knowles, Pilgrim Street, Newcastle, the contractors being Messrs. T. & R. Lamb, Gateshead.

### GENERAL.

**Mr. J. D. Linton** has designed a diploma card for the Royal Institute of Painters in Water-Colours.

**An Exhibition** by the Rochdale Art Society has been opened in the public hall of the town. There are oil paintings, water-colours, and other drawings, which, with one exception, have been contributed by local amateurs.

**The Employers' Liability Act** has given rise to 443 actions in the County Courts during 1881, 1882, and 1883. The compensation claimed was 73,337*l.*, and about a fourth, or 18,124*l.*, was awarded.

**Dr. Bode**, of the Berlin Museum, states that he has discovered among the unnamed pictures in the gallery a genuine work by Leonardo da Vinci.

**Dr. Waldstein**, director of the new Cambridge museum of archæology, will give a course of evening lectures in the theatre of the museum during the present term, on Greek art. The lectures will be open to all students of archæology, whether members of the University or not.

**The Invitation Card** for the Lord Mayor's banquet at Guildhall this year is to be printed from an elaborately-worked border of cupids engraved on copper in the last century by Francesco Bartolozzi, R.A.

**Lieut.-Colonel Charles John Moysey, C.M.G., R.E.**, has been appointed Assistant-Director of Works for Barracks, in succession to Lieut.-Colonel William Salmond, R.E.

**The Newcastle Art Union** has allotted 264*l.* 10*s.* in prizes, which have been purchased from the Newcastle-upon-Tyne Fine Art Exhibition. A further sum was contributed by the prize-winners.

**Mr. W. Hay**, architect, has designed a memorial of the late Dr. William Chambers, which it is proposed to erect in St. Giles's Cathedral, at the cost of the Town Council. The memorial consists of a chapel, with a stained glass window.

**The Art and Industrial Exhibition**, at Newbury, has been financially successful, a balance of 100*l.* remaining after payment of expenses.

**Mr. C. M. Campbell** (of the head of the firm of Messrs. Minions), has had a dessert service painted by M. Leroy, which is to be presented to the Marquis of Stafford on his lordship's marriage.

**Mr. Sidney Colvin** will deliver on the 20th inst. the first of a course of lectures on Michel Angelo, at the Museum of Archæology, Cambridge.

**Mr. H. E. Jerningham, M.P.**, has commenced excavations at Norham Castle, for the purpose of discovering traces of the old foundations.

**The old Carmelite Monastery** at Queensferry is to be restored at the cost of Captain Dundas, of Inchgarvie, and presented to the town. It will be used as a public library and reading-room.

**A New Church** in Ayr, to cost about 4,000*l.*, and a new mansion house, at Doonside, near Burns's Monument, to cost 20,000*l.*, are to be proceeded with immediately.

**The Dundee Post Office** is to be enlarged at a cost of about 3,000*l.*

**Mr. George Campbell** has been appointed inspector of buildings at Tynemouth. There were 179 applications.

**A Plumbers' Congress**, under the presidency of the Master of the Plumbers' Company (Mr. George Shaw), will be held on Monday next at the Technical Institute, South Kensington.

**Forth Bridge Works.**—The first rivet was secured in the erection of the girders on the south side on Monday evening, under the superintendence of Messrs. McLelland & Son, Glasgow.

**The Duke of Westminster** has forwarded 500*l.* to the Chester Infirmary, being the amount of the shilling fees paid by about 10,000 visitors to Eaton Hall.

**Mr. S. J. Smith**, the inspector of the Local Government Board, has lately examined Windermere, in order to report upon the alleged pollution of the lake.

**A Building Trades Exhibition** will be held in the Coloured Cloth Hall, Leeds, from January 17 to February 2, 1885.

**Bishop Clifford** intends to deliver before the Bath Literary and Philosophical Association a lecture entitled, "An attempt to describe the Vicissitudes of the City of Bath by the aid of the old Roman Baths there extant."

**The Forestry Exhibition** in Edinburgh was closed on Saturday. From July 1 it has been visited by 500,000 people.

**The First Sod** of the works for the improvement of the river Ribble was cut on Saturday. The works comprise the diversion of the river, extension of dock works, &c., and eventually will cost a million sterling.

**The Parliament House** at Quebec was partly destroyed on Saturday by dynamite. The buildings form a hollow square, each wing being 300 feet long. Three wings were completed three years ago at the cost of 150,000*l.* They are used as Government offices. The fourth, which will form the Parliament House itself, was all completed except the roof. It is four storeys high, of cut stone, with iron girders. The explosion occurred in this wing.

**Glasgow Architectural Association.**—At the last monthly meeting a paper on "Linlithgow Palace" was read by Mr. Wm. Shanks, for the author, Mr. John C. T. Murray. The paper consisted of a description of the building and its surroundings, as now existing, and then a historical review of its numerous vicissitudes, with an account of the former buildings, which are replaced by the present beautiful palace. The subject was illustrated by several diagrams and photographs.





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DESIGN FOR ADMIRALTY & WAR OFFICES  
[ PARK FRONT.]

BY MESSRS SPALDING & AULD.



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, OCTOBER 18, 1884.

### TENDERS, ETC.

\* \* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

\* \* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—  
"Contract Supplement to THE ARCHITECT."

### COMPETITIONS OPEN.

**BOMBAY.**—Nov. 6.—The Municipal Commissioner of Bombay invites Designs and Estimates for a New Municipal Hall and Offices, which must be sent to his Office by Twelve noon, on Nov. 6. A Premium of 5,000 rs. will be given for the Design most approved of by the Commissioner, with the assistance of a Committee of the Corporation; 3,000 rs. for the second, and 2,000 rs. for the third. The total cost of the buildings is not to exceed 5 lacs (5,00,000 rs.). Mr. E. C. K. Ollivant, Municipal Commissioner's Office, Bombay, or at Messrs. E. W. & R. Oliver, 1 Corbet Court, Gracechurch Street, London.

**SOOTHILL.**—Nov. 6.—Plans are Required for a Board School proposed to be Erected in Gregory Street. Mr. J. D. Good, Market Place, Dewsbury.

### CONTRACTS OPEN.

**ARMLEY (LEEDS).**—Oct. 21.—For Erection of Business Premises. Mr. C. Fowler, A.M.I.C.E., Architect, Britannia Buildings, Leeds.

**BARMOUTH.**—For Erection of Masonic Hall. Mr. T. Roberts, A.M.I.C.E., Portmadoc.

**BIRKENHEAD.**—Oct. 22.—For Erection of Park Keeper's Lodge at the Tranmere Recreation Ground. Mr. T. C. Thornton, C.E., 35 Hamilton Square.

**BOMBAY.**—Nov. 14.—For Masonry and Excavation of Wet Dock (25 acres area), to include Wharf Walls (7,750 feet), Sea Entrance, &c. Mr. J. A. McConnochie, C.E., Engineer's Office, Surrey Commercial Docks, Rotherhithe.

**BURNLEY.**—Oct. 21.—For Building Mortuary, Town's Yard, and Boundary Walls, East Side of Parish Churchyard. Mr. J. Cartwright, Borough Surveyor, Burnley.

**BURY (LANCS.).**—Oct. 21.—For Erection of Boundary Wall. Mr. J. Cartwright, C.E., Borough Surveyor.

**BURY (LANCS.).**—Oct. 21.—For Erection of Mortuary. Mr. J. Cartwright, C.E., Borough Surveyor.

**CARDIFF.**—Oct. 24.—For Construction of Filters and Service Reservoirs, Boundary Wall, &c., Heath. Mr. J. A. B. Williams, C.E., Queen's Chambers, Cardiff.

**CULLINGWORTH.**—Oct. 18.—For Building Shed at Eller Carr. Mr. J. B. Bailey, Architect, North Street, Keighley.

**DEWSBURY.**—Oct. 23.—For Enlargement and Alterations at Workhouse Infirmary. Mr. A. A. Stott, Architect, Heckmondwike.

**DUNDEE.**—Oct. 29.—For Enlargement of Post Office, Postmaster, Dundee.

**DUNDALK.**—Oct. 25.—For Construction of Works of Water Supply. Messrs. Hassard & Tyrrell, C.E., Westminster Chambers, Westminster.

**EALING.**—Nov. 3.—For Erection of Public Baths. Mr. C. Jones, C.E., Local Board Office, Ealing.

**EASTCHEAP.**—Oct. 21.—For Construction of Sewers, Gallies, &c. Colonel Haywood, Engineer to the Commissioners of Sewers, Guildhall, E.C.

**ELLAND (YORKS.).**—Oct. 29.—For Additions to Woodside Flour Mills. Messrs. Horsfall & Williams, Post Office Buildings, Halifax.

**GUILDFORD.**—Oct. 22.—For Erection of Buildings in Martyr Road. Messrs. Peak, Lunn & Pak, 3 Market Street, Guildford.

**LEICESTER.**—Oct. 23.—For Construction of Main and Storm Overflow Sewers, Dame Hill District, and Brick Sewers (1,319 yards and 269 yards) with Manholes, Ventilating Shafts, Bellmouth Junctions, Flushing Chambers, &c. Mr. J. Gordon, C.E., Borough Surveyor, Leicester.

**LINCOLN.**—Oct. 25.—For Sluice at Wainfleet Haven, with Outfall Cut, Enlargement of Bridges, &c., and Forming New Cut, Skegness. Mr. S. E. Williams, C.E., Bridge Street, Boston.

**LYME REGIS.**—Oct. 25.—For Reseating Parish Church, Building Vestry, &c. Mr. R. W. Hillman, Solicitor, Lyme Regis.

**MANSDEN (HUDDERSFIELD).**—Oct. 22.—For Additions and Alterations to Wood Bottom Mills. Messrs. J. Kirk & Sons, Huddersfield.

**NEATH.**—Oct. 29.—For Construction of Reservoir, Laying Water Mains, &c. Mr. W. E. Thomas, Surveyor, 53 Water Street, Neath.

**NELSON (LANCS.).**—Oct. 22.—For Erection of Weaving Shed. Mr. T. Bell, 14 Grimshawe Street, Burnley.

**NENAGH (IRELAND).**—Oct. 30.—For Erection of Laundry and Drying Room. Mr. J. Houston, Sheehan, Clerk to the Union.

**NEWCASTLE-ON-TYNE.**—Oct. 23.—For Erection of a Bird and Fish Market. City Engineer's Office.

**NEWTON-LE-WILLOWS.**—Oct. 20.—For Laying Pipe Sewers (1,400 yards). Mr. Richard Brierley, Surveyor, Newton-le-Willows.

**NEW ROSS.**—Oct. 29.—For Construction of Iron Vialcut with Swing Bridge over the River Barrow. Drawings, &c., at the Engineer's Office, Bray, co. Wicklow.

**NOTTINGHAM.**—Oct. 25.—For Building Five Shops, Gelling Street. Mr. Brown, Borough Engineer, Municipal Offices, Nottingham.

**OOLA, CO. LIMERICK.**—Oct. 22.—For Building Constabulary Barrack. Mr. W. B. Saly, Offices of Public Works, Dublin.

**OOLA (LIMERICK).**—For Erection of Royal Irish Constabulary Barracks. Constabulary Barracks, William Street, Limerick.

**OPORTO.**—Dec. 15.—For Construction of Covered Market. Senor J. A. Correa de Barros, President of the Municipal Board of Oporto, Portugal.

**PORTSMOUTH.**—Oct. 18.—For Proposed Changes at Workhouse Buildings. Mr. Kempster, County Surveyor, Balaclao.

**ROWDITCH.**—Oct. 20.—For Construction of Roads. Mr. Thomas Coulthurst, Borough Engineer, Full Street, Derby.

**SOUTHOWRAM.**—Oct. 20.—For Erection of Barn and Mistal at Town Gate. Mr. Edwin Taylor, Architect, Hipperholme.

**SWANSEA.**—Oct. 18.—For Building Public Library, Art Gallery, Science and Art Schools. Mr. Henry Holtom, Architect, Bond Street, Dewsbury.

**SWANSEA.**—Oct. 27.—For Erection of Wall at Dan-y-Craig Cemetery. Borough Surveyor, Guildhall.

**TREDEGAR (MON.).**—For Erection of House. Mr. C. Dauncey, Tredegar.

**TRURO.**—Oct. 18.—For Building Post Office. Mr. Silvanus Treval, Architect, Truro.

**TURTON, BOLTON.**—Oct. 29.—For Erection of Public Offices at Birtenshaw Road, Bromley Cross. Mr. James Parkinson, Surveyor.

**VICTORIA DOCKS, E.**—Oct. 18.—For Building Sub-District Post Office. Mr. A. B. Mitford, Secretary, H.M. Office of Works, 12 Whitehall Place, S.W.

**WAKEFIELD.**—Oct. 20.—For Laying Stoneware Tubes (two miles), &c., to Farm Conduit. Mr. E. Filliter, C.E., 16 East Parade, Leeds.

**WAKEFIELD.**—Oct. 20.—For Providing and Laying about Two Miles of 24-inch Stoneware Tubes, with Stanford's Patent Joints. Mr. Edward Filliter, C.E., Leeds.

**WINCHESTER.**—Oct. 22.—For Erection of Warehouse. Mr. T. Stopher, 75 High Street, Winchester.

**YARMOUTH.**—Oct. 27.—For Enlargement of Post Office. Postmaster, Yarmouth.

### TENDERS.

#### BARCOMBE.

For Building Four Houses and Shops and Nine Cottages. Mr. GEORGE FULLER, Architect, Leyes.

Andrews, Lindfield	£3,417 13 2
Cheesman & Co., Uckfield	2,940 0 0
Longley, Crawley	2,750 0 0
Wright, Brighton	2,617 0 0
Huggett & Coster, Eastbourne	2,500 0 0
Berry & Bussey, Lewes	2,200 0 0
Baker, Seaford	2,147 0 0
Woolger, Newhaven	2,100 0 0
Donovan, Eastbourne	2,094 11 8
PLEDGE, East Grinstead (accepted)	1,900 0 0

#### CARLISLE.

For New Drying Closet at Fusehill Workhouse. LARMUTH & Co., Salford, Manchester (accepted) . . . . . £86 2 0

#### CHERTSEY.

For Alterations and Additions to Post Office. Mr. CHARLES WHICH, Architect, London Street, Chertsey. REARELL, Staines (accepted) . . . . . £175 0 0

#### CHISLEHURST.

For Erecting Cottage at Coed Bell, Chislehurst, for Miss Amos. Messrs. HABERSHON & FAWCKNER, Architects, Bloomsbury Square.

Hooper	£338 0 0
Sperring	335 0 0
Groom Dulwich	297 0 0

#### CHOBHAM.

For Erection of Residence. Mr. EDWIN T. HALL, A.R.I.B.A., Architect, 57 Moorgate Street, London. Leathley . . . . . £980 0 0 BATCHELOR, Merton, Surrey (accepted) . . . . . 950 0 0

#### DORKING.

For Alterations, &c., to Mount House, Dorking. Mr. FREDERIC W. LEDGER, Architect, London. Hammond, Dorking . . . . . £297 10 0 BURDETT & SON, Guildford (accepted) . . . . . 250 19 3

#### DULWICH.

For Erection of Billiard Room, &c., for Mr. H.W. Hunt. Mr. EDWIN T. HALL, A.R.I.B.A., Architect, 57 Moorgate Street, E.C. Quantities by Mr. G. A. Fryce-Cuxson, Westminster Chambers.

Lynde	£970 0 0
J. & C. Bowyer	932 0 0
Fish, Prestige & Co.	930 0 0
Woodward	910 0 0
FOSTER (accepted)	875 0 0



**DUNFERMLINE.**

For Erection of Proposed Double Cottage at Cameron Bridge, for Mr. H. V. Haig. Mr. J. HOUSTON, Architect, Dunfermline. Quantities by the Architect.

Wilkie & Gibb, Leven	£289 0 0
STREET & SONS, Dunfermline (accepted)	269 14 0
<i>Carpenter and Joiner.</i>	
Birrell, Leven	212 0 0
WILSON, Austruther (accepted)	204 0 0
<i>Slater and Plasterer.</i>	
Knox, Leven	91 6 11
J. & A. WILLIAMSON, Kennoway (accepted)	78 14 0
<i>Plumber.</i>	
Whyte, Dunfermline	31 5 0
WALKER, Leven (accepted)	30 19 0

**EAST MOLESEY.**

For New Sunday Schools adjoining the Wesleyan Chapel, East Molesey. Mr. CHARLES BELL, Architect, New Broad Street. Quantities supplied by Mr. H. Lovegrove.

Holloway	£1,727 0 0
Jones	1,661 0 0
Wheatley & Sons	1,653 0 0
Oldridge & Sons	1,623 10 6
Smith & Sons	1,619 0 0
Piller	1,615 0 0
Allen & Sons	1,606 0 0
Higgs	1,521 0 0
Hickenbotham	1,491 0 0
Potterton & Co.	1,426 14 0

(The above amounts include the gallery.)

**EXMOUTH.**

For the Erection of a Collegiate School in Raleigh Terrace, for the Rev. A. T. Wran.

Luscombe & Son, Exeter	£1,733 0 0
Scadling, Exeter	1,529 0 0
Dart, Crediton	1,500 0 0
Holmes, Exeter	1,497 10 0
Hooper, Exmouth	1,350 0 0
Pring	1,306 0 0
Perry & Son	1,297 0 0
COOPER & SON (accepted)	1,276 3 9

**FENTON.**

For Building Cottages at Fenton, Staffs., for Mr. W. M. Baker. Messrs. R. SCRIVENER & SONS, Architects and Surveyors, Hanley. Quantities by the Architects.

Bennion, Longton	£2,699 0 0
Barlow, Stoke-on-Trent	2,693 0 0
Bromage, Fenton	2,680 0 0
Gibson, Tunstall	2,675 0 0
Bradbury, Stoke-on-Trent	2,600 0 0
Bradshaw & Westwood, Stoke-on-Trent	2,590 0 0
WETTON, Fenton (accepted)	2,477 0 0
Minks, Fenton	2,350 0 0
Ward, Hanley	1,950 0 0

**GREENWICH.**

For Building Public Hall and Coffee Tavern, Greenwich. Mr. WM. RICKWOOD, Architect, Plumstead. Quantities by Architect.

<i>1st Contract.</i>	
Howell	£180 0 0
Loneragan	179 15 0
Harding	179 0 0
STAINES & SON (accepted)	178 0 0
Avard	159 0 0
<i>2nd Contract.</i>	
Proctor	621 0 0
White & Co.	575 0 0
Mower	554 0 0
Staines & Son	527 0 0
Stafford	519 0 0
Holloway	513 0 0
Holding	495 0 0
Loneragan	488 0 0
Pack Bros.	485 0 0
R. & E. EVANS (accepted)	419 0 0

**GUILDFORD.**

For Three Houses on the Artillery Field Estate, Guildford, for Mr. J. Rose. Mr. A. B. HARDING, Architect.

Tribe & Robinson	£63 0 0
Downes	940 0 0
Hill & Downes	911 0 0
G. & R. Smith	880 0 0
Banham	787 0 0
CARRINGTON & PETO (accepted)	738 0 0

**HASTINGS.**

For the Erection of a Dwelling-house and Shop in Queen's Road, for Mr. E. Hawes. Mr. ALFRED W. CROSS, A.R.I.B.A., Architect, Hastings, and 56 Chancery Lane, London.

Cruttenden	£1,010 0 0
Phillips	1,035 0 0
Avis	1,030 0 0
Coussens	1,025 0 0
Rodda	1,000 0 0
Harman	955 0 0
Woodall	929 0 0

**KIRKHAM.**

For Building Four Houses and Shop, Whiteside Street, Mr. EDWIN BUSH, Architect, Preston. Quantities by the Architect.

Swarbrick, excavator, drainer, and bricklayer	£195 0 0
Macgregor, carpenter and joiner	164 0 0
Clarkson, faggot and slater	119 0 0
Harrison, mason	61 0 0
Woods & Hothersall, plumber, glazier, and painter	41 0 0
Arrowsmith, plasterer	36 0 0
Sims & Son, grates, ranges, &c.	18 6 0
Total	£622 6 0

**HOPE, NORTH WALES.**

For Heating with Hot Water Hope Church, North Wales. Mr. J. OLDRID SCOTT, Architect, 31 Spring Gardens, London.

MESSINGER & Co., Loughborough (accepted) . £95 17 6

**LEICESTER.**

For Erection of Board School, in Medway Street.

CLARKE & GARRETT (accepted) . £9,562 0 0

**LIVERPOOL.**

For Demolition of the Existing Stables and Re-erection in Gascoyne Street, for the Corporation of Liverpool. Mr. CLEMENT DUNSCOMB, M.A., M.Inst. C.E., City Engineer.

A	£5,861 0 11
B	4,813 17 6
C	4,699 0 0
D	4,550 0 0
E	4,519 0 0
F	4,449 0 0
G	4,440 0 0
H	4,255 0 0
I	4,243 0 0
J (accepted)	4,231 0 0

For Applying Patent Hot-water Heating Apparatus for Four Galvanised Iron Tents, for Liverpool Corporation at Infectious Hospital.

RENTON GIBBS (accepted).

For Heating Heath House, Washwood Heath, Birmingham, for Mr. W. J. Foulkes.

RENTON GIBBS (accepted).

For Heating Offices, St. Helen's Foundry, St. Helen's, Lancs., for Messrs. Robert Daglish & Co.

RENTON GIBBS (accepted).

For Heating Christ Church Mission Room, Wescombe Park, London.

RENTON GIBBS (accepted).

For Erecting a Patent Hot-water Heating Apparatus at Shrewsbury, for Mr. G. E. Harries.

RENTON GIBBS (accepted).

**LONDON.**

For the Erection of a School to provide accommodation for 1,200 children in Montem Street (Finsbury Division), for the School Board for London. Mr. E. R. ROBSON, Architect.

Goodman	£17,983 0 0
Patman & Fotheringham	17,878 0 0
Kirk & Randall	17,774 0 0
Downs	17,707 0 0
Grover	17,388 0 0
Shurmer	16,560 0 0
Stimpson & Co.	16,524 0 0
Wall	16,429 0 0
Priestley & Gurney	16,398 0 0
Bangs & Co.	16,337 0 0
Niblett	16,299 0 0
Jerrard	16,107 0 0
Wall Bros.	15,994 0 0
Atherton & Latta	15,990 0 0

For Building Board School, Eglinton Road, Plumstead. Mr. E. R. ROBSON, Architect.

Grover	£12,600 0 0
Loneragan Bros.	12,596 0 0
Scrivener & Co.	12,572 0 0
Howell & Son	12,553 0 0
Patman & Fotheringham	12,419 0 0
Wall Bros.	12,249 0 0
Wall	12,184 0 0
Jerrard	11,983 0 0
Stimpson & Co.	11,970 0 0
Kirk & Randall	11,883 0 0
Johnson	11,600 0 0

For Enlargement of Board School, Portman Place, Mile End, E. Mr. E. R. ROBSON, Architect.

F. & F. Wool	£3,727 0 0
Sargeant	8,136 0 0
Steel Bros.	7,949 0 0
Shurmer	7,758 0 0
Hunt	7,695 0 0
Perry & Co.	7,633 0 0
Howe & Son	7,622 0 0
Wall Bros.	7,480 0 0
Grover	7,455 0 0
Atherton & Latta	7,450 0 0
Scrivener & Co.	7,445 0 0
Pritchard	7,345 0 0
Oldrey	7,200 0 0
Cox	7,158 0 0
Jerrard	7,149 0 0
Stimpson & Co.	7,086 0 0

For Covered Playgrounds for Board Schools.

<i>Colls Road.</i>	
Johnson	£380 0 0
Holden & Co.	335 0 0
Riley Bros.	270 0 0

<i>Fleet Road.</i>	
Riley Bros.	235 0 0
Wall Bros.	223 0 0
Lowe	207 0 0

<i>St. George's Road.</i>	
Lathey Bros.	173 0 0
Ewart & Son	114 10 0
Holden & Co.	105 0 0

*Graystoke Place.—(Partitions.)*

Davis Bros.	73 0 0
Pratt	67 0 0
Pritchard	66 15 0

*Albion Street.—(Partitions.)*

Nightingale	174 0 0
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For House and Shop for Mr. Harradine, Plashet Lane, East Ham. Mr. BETHELL, Architect.

Bicknal	£445 0 0
Baxter	429 0 0
Wyles	424 0 0
PARSONS (accepted)	350 0 0

**LONDON—continued.**

For Rebuilding No 11 Fore Street, City. Mr. JOHN SLATER, B.A., Architect. Quantities by Mr. L. C. Riddett.

King & Son	£3,250 0 0
Brown, Son & Blomfield	3,100 0 0
Cock	3,044 10 0
Williams & Son	2,943 0 0
L. H. & R. Roberts	2,928 0 0
J. & J. Greenwood	2,859 0 0
Cond'r	2,816 0 0
Downs	2,846 0 0
Patman & Fotheringham	2,773 0 0

All amounts net after allowing for old materials.

For the Erection of Building on the site of Nos. 20 and 21 Little Windmill Street, for Mr. W. F. Williams.

Green & Son	£3,463 0 0
Bangs & Co.	3,159 0 0
Colls & Sons	3,010 0 0
Mowlem & Co.	2,948 0 0
Conder	2,888 0 0
Scrivener	2,883 0 0
Lawrance	2,808 0 0
Hunt	2,799 0 0

For Building the Monument Tavern, adjoining the Monument Station of the Metropolitan and Metropolitan District Railways. Messrs. ISAACS & FLORENCE, Architects. Quantities by Mr. L. C. Riddett.

Simpson	£6,573 0 0
Perry & Co.	6,333 0 0
Hall, Biddall & Co.	6,310 0 0
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Conder	5,963 0 0
Kirk & Randall	5,814 0 0
Patman & Fotheringham	5,765 0 0
Greenwood	5,591 0 0

For Erection of Stables at Beech Hill Park, Hadley Wood. Mr. EDWIN T. HALL, A.R.I.B.A., Architect, 57 Moor-gate Street, E.C.

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Marriott	780 0 0
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Société Française des Asphaltes	£595 0 0
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HOLLOWAY (accepted)	£251 0 0
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Rathbone, Hillmorton	491 0 0
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**NEWCASTLE.**

For Alterations to Premises, Newcastle, Staffs., for Messrs. Benson & Co. Messrs. R. SCRIVENER & Co., Architects, Hanley.

Sutton	£239 0 0
GALLIMORE (accepted)	235 0 0

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<i>Accepted Tenders.</i>	
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Whiteman, Longwood, plasterer	65 0 0
Johnson & Son, Morpeth, slater	62 0 0
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Devhurst, Heckmondwike, painter	23 0 0

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For Construction of a Reservoir, and various Works connected therewith, to be situated on Ramsden Clough, for the Todmorden Waterworks Company. Mr. J. FARRAR, C.E., Market Street, Bury, Lancs.

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Atkinson & Son, Todmorden	38,839 9 7
Baker & Sons, Halifax	38,124 3 4
G. & J. E. Read, Burnley	33,716 17 9
Lumb, Todmorden	33,500 0 0
Monk & Newell, Bootle, Liverpool	33,089 16 8
McKnight, Halifax	30,520 0 0
Varley, Stathwaite, near Huddersfield	30,042 0 0
Dovernor & Sons, Sowerby Bridge	29,953 16 0
Parkinson & Bower, Halifax	29,770 0 0
Clegg & Sharples, Accrington	27,999 17 3
Marshall, Darlington	26,605 12 2
Petch & Fox, Scarborough	26,509 11 0
Godfrey, Hull	26,117 17 9
Holme & King, Wigan	25,945 0 0
Nowell, Manchester	25,240 0 0
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Baker	916 0 0
Tarr	788 0 0
Burton	743 16 0
Podger	740 0 0
Clarke	716 0 0
J. Hayes	700 0 0
Hatherly	697 0 0
Davis	696 0 0
Wilkins	690 0 0
C. A. Hayes	670 0 0
Tucker	669 0 0
Veals	664 0 0
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Thomas	600 0 0
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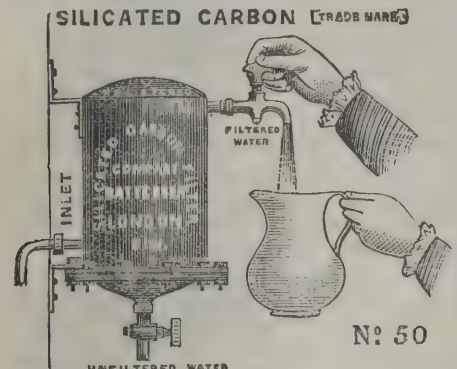
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# The Architect.

## THE POSITION OF MUNICIPAL SURVEYORS.



HERE has been for the last few years a sort of running complaint kept up on behalf of the official surveyors of Town Councils, Vestries, and Local Boards of Health, by some of themselves as well as by friends of their cause, which by this time ought to have been brought into intelligible and tangible shape. At a somewhat demonstrative assembly of "the Association of Municipal and Sanitary Engineers and Surveyors" which was held recently under chairmanship no less dignified than that of Sir CHARLES DILKE,

President of the Local Government Board, the subject was brought up again. The question involved is one of importance to practical architects, and as such may well engage the attention of the architectural profession at large.

It is of such importance chiefly because of the obvious fact that, as "surveyors" of this class increase in number and advance in status, it is from the ranks of the unemployed architects that they must to some considerable extent be supplied. Not so many years ago but that comparatively young men can remember the time, it used to be the practice with the less responsible order of municipal bodies to look upon the appointment of a "surveyor" as a snug little piece of private patronage, which ought to be turned in the direction of any broken-down friend or colleague to whom the post would be welcome as a sort of sinecure. There is a saying that a clerk of works is "the eye of the architect;" and, on a similar principle, a knot of worthy boardsmen, taking their surveyor to be merely the eye of the board, would indeed be best satisfied with a personal friend who would look at the world through their own spectacles rather than expect them to look at it through his. Even yet, in spite of all the outcry that is being made throughout the country about the need for expert official control in matters of public health, safety, and convenience, it is well known that there are "surveyors" by the hundred, acting for all varieties of public authorities, whose training for their duties began at the date of their appointment, and who are self-taught men, therefore, in the most limited and least honourable meaning of the term.

But this state of things is now passing away, and we see a numerous profession coming into practice which professes to provide our public bodies with properly educated and experienced practical officers under the title of "surveyors"—amplified into that of "engineers" and sometimes "architects" when occasion requires—who shall be no longer the mere subordinate assistants of the governing boards, but their recognised responsible advisers and authoritative professional agents. It is quite natural that at first there should be a little friction in the working of such a scheme. It is not so much, perhaps, that the new experts will stand upon their rights, as that the old non-experts, in the character of their masters, employers, superiors, and so forth, will stand upon theirs. It may not even be that the surveyors will refuse in practice to give way to the boards, so much as that the boards will refuse on principle to give way to the surveyors. At any rate, we may take it that it is alleged to be a common occurrence for professional officials in the engineering and architectural business of the public to find themselves more or less embarrassed by the unintelligent and arbitrary decisions and orders of the representative bodies whom they "serve," and whom therefore they are expected to "obey" unless they wish to be turned out of office.

It is not easy to say which side will eventually conquer in this controversy; the end of it must rather be that each will in time come to understand the other better. The policy of all public business in England is that the ultimate authority must rest indisputably in the hands of public representative bodies, who shall determine all questions by a majority of votes. Amongst other things, all professional agency conducted on behalf of the public by experts, however recondite the work may be, must in one way or another take instructions from such entirely unprofessional

and inexpert tribunals. Every one of these, no matter how inferior its members may seem to be in the scale of intelligence, is loyally recognised by sensible persons as an embodiment of the common sense of the commonalty transacting its own affairs; and, as a fact, it is often a matter of surprise that the business is so well transacted as it is by such unpromising means. Grumbling on the part of officials, there must always be; but the outraged feelings of an inspector of nuisances ought to be soothed not a little when he remembers that generals in the field and admirals on the ocean grumble in precisely the same way for precisely the same causes, only that they are said occasionally to express themselves in much stronger language than surveyors are permitted to use. In that province of the public service, however, which we have in view, when the various appointments under the name of surveyors have in the nature of things come at length to be occupied by educated architects and engineers, we do not hesitate to suggest that the friction between them and their boards will grow less and less. Anything like an organised agitation on the part of public surveyors for the purpose of bringing municipal authorities, as they may think, to a reasonable recognition of professional ascendancy, would be not only mischievous because injudicious, but wholly futile because unnecessary. The object of organisation ought rather to be, on the contrary, the advancement of skill amongst the officials—in other words, the improvement of the professional ability of candidates—as the only real means of increasing their influence with the public and their representatives. The rule to rely upon is a very simple one: common sense is quick at discerning the difference between the reality of professional usefulness and the pretence of it.

At the same time it would be idle for us to dispute the fact that the professional officers of our minor public authorities have sometimes a hard time of it. Confining our attention to our proper subject, we will say plainly that a "surveyor" who happens to be either a little too weak or a little too strong may find himself—especially when he has the honour to be the subject of a lively debate in public, in which he cannot take his own part—almost as roughly handled as he can well be. It is perfectly marvellous what an amount of confidence and erudition a parochial orator from the back streets will display in the discussion of an engineering or architectural question, when fairly on his mettle in the presence of an audience of admirers whose business when they are at home is as primitive as his own. Building, even in its simple manifestations, we cannot point out too often, is a thing not "understood of the people." When such persons as Guardians of the Poor assume the responsibility of overruling the opinion of their medical officer, there is this at least to be said—that common sense knows something of medicine, if not much. When they contradict their solicitor, they are quite entitled to remind him that law professes to be the quintessence of common sense and makes use of twelve simple men in a box as the safeguard of justice. But when the control of building construction, or drainage, or road-making, or the like, is placed in the hands of a board of average tradesmen, there is much truth in the argument which so many surveyors offer, that the nature of such business imperatively requires the exercise of special deference towards a professional adviser. And yet the fact seems to be that this is the one class of public business in which the necessity for such deference is most notably unrecognised. The case of the Metropolitan Board of Works is a very remarkable instance of this. Before the year 1855 the great building authority in London was a Board of three architects, called the Official Referees, with a sort of recording angel, a lawyer, called their Registrar. On account of some pigheadedness amongst those gentlemen, which put the lawyer in permanent and contemptuous antagonism to the architects, their authority was bodily transferred to the Metropolitan Board of Works, who were provided with a single architectural official called by the sounding and suggestive title of "Superintending Architect of Metropolitan Buildings." The intention and expectation was that the chief of the former Official Referees, Professor HOSKING, should take this position, under the general supervision of the Board in the place of the former Registrar. But the result was that Professor HOSKING's candidature was promptly rejected; an unknown man, Mr. MARRABLE, was appointed, to be in reality the compensation valuer for new streets; and the business of the Official Referees was undertaken by a "Building Act Committee" of the Board. This was an assertion of the principle of the common sense of



the commonality *versus* the special skill of the expert with a vengeance; there is no doubt it was deliberately done; and from that day to this the Building Act business of the Metropolis has been virtually transacted by the representatives personally. It has been so transacted, we are bound to add, with much more success than could have been anticipated. Possibly this success may be due to the circumstance that the Board has always had several clever architects and builders amongst its members; but we quote the incident only as an illustration on the very highest ground of the readiness with which municipal authorities in general may still be expected to assume the command over their "surveyors."

After all, we commend to our official readers who may disapprove of such a course a very simple consolation. So much depends upon the individuality of the officer himself, that it may be said everything depends upon him. We hope to see the "surveyors" of this country becoming year by year more and more respected, not only by their superior authorities, but by the public. A good servant, it is said, makes a good master; but a good master likewise makes a good servant. A high sense of duty and a sound knowledge of one's business will always secure respect and deference when nothing else will.

### PALLADIO: THE MAN AND THE ARCHITECT.

TO the second edition of Signor CAMILLO BOITO's artistic studies on LEONARDO DA VINCI and MICHEL ANGELO a third has been added on ANDREA PALLADIO, which is in some respects still more worthy of attention. PALLADIO stands in most important respects, in contrast to the great geniuses with whom he is here associated, and he did not properly even belong to their age. He was only eleven years old when DA VINCI died; and if he was past middle age when BUONARROTI departed, it was only because the mighty Florentine outlived by so many years his noblest contemporaries and competitors.

DA VINCI and MICHEL ANGELO had this in common, that they regarded art as in its essence one, and professed and studied it as one, the primary germ of which painting, sculpture, architecture, and even poetry were incidental developments. But PALLADIO was strictly an architect; he did not, like the others, proceed from art in general to architecture in particular. From the very first he took his stand upon architecture, and formed a distinct conception of a special architectural problem, to which he devoted himself and prosecuted his studies with constant reference to its special suggestions and requirements. This was an age in which men of culture vied with each other so eagerly in the elegance with which they wrote Latin, that rather than fall into solecisms they restricted themselves to expressing only such thoughts as might have occurred to a Roman of the age of CICERO. PALLADIO was enamoured of the architectural language of antiquity, of which he studied the remains at Rome and elsewhere; but he applied himself to so manipulate these antique forms that while he preserved their charm he still made them subservient to modern purposes, expressive of modern meanings. It must be admitted that he achieved very considerable success. Palladian architecture will remain the collective title of what is truly a style of architecture. It has many varieties, and even yet has probably not seen its last development. Its characteristics are, in detail, the employment of the general elements of Roman architecture with considerable freedom of adaptation; regard for that quality of refinement in profiles and mouldings which is not absent, but by no means universally considered in Gothic architecture, and all under control of a presiding sense of symmetry, simplicity, and grace.

Signor BOITO adduces evidence to show that the birth year of ANDREA was not, as once believed, 1518, but 1508, the year which is indeed accepted in the recent Florentine edition of VASARI. He died at the age of seventy-two, in 1580, to the grief, says a contemporary, not only of his immediate friends, but of the entire city of Vicenza. VASARI, whom he outlived six years, mentions him with enthusiasm in the very last chapter of his work. At this date TITIAN, who was born before RAPHAEL, was still living at Venice, and—to no good effect—painting still. But it is with TINTORETTO (died 1594) and PAUL VERONESE (1535–1588) that PALLADIO really groups as a contemporary. At this date we are sensible of a glow, but it is the after-glow of the culmination of Italian art. Venice is grand, is luxurious, is even dignified, but the

essential nobleness which was at the heart of Florentine art and civilisation was wanting. Still, a period of material prosperity promoted an art in harmony with it. True, a century had elapsed since the voyage of VASCO DE GAMA had diverted much of the trade of her merchant princes, and the Republic had failed to check the aggressive Ottomites in the Levant; but skilful statesmanship had succeeded in gaining back, on the mainland of Italy, almost all that had been lost by the League of Cambray, and a period of uneventful annals succeeded—that sign of internal prosperity which accounts for the scope which heads of noble families, and wealthy municipalities, could allow to PALLADIO in building them palaces, and to TINTORETTO and PAUL VERONESE in decorating them.

Signor BOITO divides his essay into two sections: one on the personality of the architect, the other on the characteristics of his works. As regards the latter, who that in exploring one city after another in that "pleasant garden of fair Italy" that lies below the eastern spurs of the Alps, has not been struck by the special character which, above all, is given to Vicenza by the imposing and attractive works of its native architect? Failing of such an opportunity, or supplementary to it, we turn with zest to our "Fergusson," and have that peculiar pleasure of meeting with criticisms which strike a reader as so apposite that he can willingly flatter himself that it is due only to an accident that they did not occur to himself. But this is a large subject, and we turn at the present time to glean some interesting details respecting the man himself.

His father's name was PIETRO OF VICENZA, and that is all that is known, beyond certain presumptions that he had no claim whatever to gentle rank. He was indebted for early recognition of his talents, and apparently also for his expressive name PALLADIO, to TRISSINO, who is not undistinguished in the literature of the day. To TRISSINO he owed more than one opportunity of visiting Rome and making careful study of its antiquities; how far it was due to the same friend, how far to his own unaided energy, that he secured the advantages derivable from a liberal education, which he certainly possessed, does not appear. The portraits of him, are said to be questionable, as all dating long after his death; but this is no conclusive objection if they agree to a considerable extent, as they probably followed others that have perished. As described by a contemporary, he was rather short than of middle height, of handsome presence, and very cheerful habitual expression of countenance. His agreeable and lively conversation, it is added, was much appreciated by the men of rank with whom he was in communication, and, on the other hand, in his intercourse with his workmen he was familiar and affable. He took great pains with those of every trade to instruct them in processes of work and in familiarity with architectural terms, and had the art of obtaining zealous and cheerful service by his vivacity and friendly consideration. So VASARI, after giving a list of the works which he had already executed, concludes:—"I cannot but mention that with such excellence in his art is combined a disposition so agreeable and refined, as to render him the greatest favourite in every society."

This gaiety of nature is not salient in the tenor of his preserved correspondence, but we credit it all the same, just as our faith in BEN JONSON's testimony to "the free and open nature" of SHAKESPEARE is not shaken because, when a Stratford man did not pay for oats that he had bought, the poet took the law of him. This correspondence contains recognition in several instances, and in very cordial terms, of the merits of contemporary architects, and the implied cordiality was doubtless genuine. Still the tendencies of rivalry, and especially of rivalry in competitions, could not but be the same in the sixteenth century that they have been known to be in centuries succeeding.

It was as early as 1549 that the Council of Vicenza, by ninety-nine votes against seventeen, decided in favour of his model for their town hall, and so deserved the gratitude of all time. In 1577 the Doges' palace at Venice was seriously damaged by a fire, and PALLADIO was one among several architects who were consulted by the signiory as to the extent of the mischief and the best remedy. He was alone among four to give an opinion that the building was so unsafe as to require reconstruction. It does not quite appear how much of this necessity he put to the account of the fire, and how much to what he conceived to be original defective construction. What does peep out is that he was likely to be disposed to exaggerate both sources of weakness from the sense that, whether the



building was really secure or not, it did not appear so, which to his appreciation was almost as bad. He represented that the upper walls, pierced with only a few large windows, were too heavy for the open loggia and the colonnade or portico below it—so much too heavy that sooner or later it would certainly crush them: an undoubted mistake, for there they happily stand to this day. The parallels which he cited from the works of nature have more pertinence to the sentiment than to the fact of stability. The members of a tree, he pointed out, increase in delicacy by exact gradation upwards, from trunk to bough and thence to topmost twig. The awkward analogy of the human figure he got over by urging that a man erect and resting equally on both legs has but a precarious stability to oppose to a sudden impact. Every work of the ancients, from the Pantheon to the Pyramids, confirmed the principle. He did not propose to alter the entire elevation. He would have closed the open gallery, and introduced very solid piers or pilasters below, and so, while he remedied the assumed insecurity, get rid of the offensive appearance of top-heaviness and the incongruous relation of the upper and lower divisions. This scheme of modification was not the only one or the most extreme. One architect would have cased the building with superposed Ionic and Corinthian orders; another denounced it as a hopeless deformity and utterly barbarous, and, concurring with the general criticism of PALLADIO, would have razed it to the foundations to make way for a building "of such beauty as to be indeed worthy of so renowned and excellent a Republic." Between those who would raze it entirely and ANTONIO DAL PONTE, who had his way in restoring it without change, PALLADIO was left alone in reporting it as unsafe. None can regret that DAL PONTE prevailed, and that so was preserved to us the Palace of the Doges of the earlier centuries of the Republic. At the same time we must recognise the fact that it is not exactly as architecture that it tells so effectively. It is an object that painters have never been tired of transferring to canvas; it is not a design that any architect has ever thought of copying, or even of reproducing with modifications. Contrast with the more regular buildings around, imposing magnitude with simplicity of parts, the leading proportions of the mass, its colour, and then its historic associations, all combine to heighten its picturesqueness. But picturesqueness is not the first merit of architecture, or Tintern and Melrose would surpass Lincoln and Salisbury.

Strange to say, PALLADIO went far to confute his criticisms of the Doges' palace, as stated without qualification by his own work. It is impossible to stand before his Chiericati palace, now the museum of Vicenza, and not be impressed by a sense of imposing magnificence, combined with that pleasing harmony which is all the more pleasing because the secret of the charm does not betray itself: yet its characteristics range with those of the Doges' palace; we are looking at a free portico, which supports an open loggia with closed and heavier members of composition above all.

His report on the Venetian palace was written with some warmth. He could not have been the artist he was if his enthusiasm might not sometimes be so ruffled that even his temper betrayed irritability. It is much, indeed, if, with his passionate predilection for Classic forms, he could sometimes bring himself to speak indulgently of Gothic architecture. But politeness, like patience, has its limits. The limits of both were reached for PALLADIO in a discussion of projects for completing the yet uncompleted façade of the vast Gothic church of San Petronio at Bologna. He had as little doubt as to the propriety of adopting the Classic style as his admirer INIGO JONES entertained about adding a Corinthian portico to the Gothic cathedral of St. Paul's, at London. When we consider how triumphant was his success in clothing the Gothic Basilica of Vicenza with noble arcades of Classic detail, it is easy to understand his disappointment at losing the chance of another achievement upon so considerable a scale. He was opposed and foiled on the double ground of the incongruousness of such an association of opposites, and then of the great expense of the marble which he required for his comprehensive design. He did not dissemble his scorn of both objections; those, he said, who insisted on the miserable matter of cost were only exhibiting a spirit conformable to the genius of that ignoble German (that is Gothic) architecture of theirs. Considering how pervading was the worship of Classical antiquity at this time in Italy, what is most remarkable, perhaps, in these debates about San Petronio and the Doges' palace is that there

should have been found a remnant who thought incongruousness too great a price to pay for even columns and entablatures, and were strong enough to hold their ground in favour of the denounced barbaric buildings on the strength of, at least, their self-consistency.

The great merit of PALLADIO himself was that while earnest for the revival of ancient forms and their adaptations to the social conditions of his time, he was firm to a certain standard of purity, and never gave in to the alluring extravagances which MICHEL ANGELO might aspire to make majestic, but which with meaner minds became fantastic and frivolous. Even the names which he gave his children—LEONIDA, ORAZIO, ZENOBIA—are characteristic of the spirit of his art and of his epoch. But there is nothing of what has been stigmatised as the paganism of this epoch, in the records of his life or in his writings. The architect of the Redentore and other churches at Venice expresses in surely no inappropriate tone his sense "that the best ability of the architect is bound to be exercised upon the edifices in which the Maker and Giver of all things is worshipped and thanked for His so great benefits done to us. And truly, when we contemplate this beautiful structure, the world; when we consider how replete it is with marvellous beauty and embellishment, we cannot hesitate as to our duty in the little temples which have to reflect the semblance of that most vast, to so design them that they shall convey to beholders a sentiment of graceful sweetness and harmony: base and shameful it were if we who are in the light should be surpassed by those who lived in the times which were destitute of saving truth."

On the whole, no doubt, PALLADIO had reason for the thankfulness, which he is not slow to express, for opportunities to give actual embodiment to the results of inventive study; but we have seen that he was not successful in all his competitions, and even success was tempered in many instances by those familiar after-troubles of enforced changes and mutilations of a design by the whims or the necessities of employers. Of one business at Venice, about a theatre, he writes to Count VINCENZO ARNALDI:—"I have come to an end with the construction of that blessed theatre in connection with which I have done penance enough for all the sins I ever committed or ever shall."

It is PALLADIO, the man, with whom we have been at present concerned, and not with his architecture; otherwise it were hard to stay the pen without some words devoted to the Basilica of Vicenza, to what FERGUSON justly calls "the happiest adaptation of Classical art to modern purposes which has yet been executed in Europe."

The Olympic theatre at Vicenza was his last work. It is the oldest permanent theatre in Europe, but, indeed, chiefly interesting as a curiosity. The scene is designed after VITRUVIUS; it exhibits three portals opening to divergent architectural vistas in continuation of the proscenium. As we look at these by daylight from the auditorium the illusion of reality is marvellous; but the illusion is amusingly irrecoverable if a visitor returns to his first station there after a close inspection of the contrivances by which columns, flattened and built up in perspective diminution, are ingeniously made to conduct the eye insensibly to the colonnades of the proper painted scene.

## ART NOTES.

THE plate which Mr. R. W. MACBETH, A.R.A., has etched after *The Harbour of Refuge*, by the late FREDERICK WALKER, A.R.A., is on view at Messrs. AGNEW'S gallery, together with the original oil picture. It will be remembered that WALKER painted the subject in water-colours in the first instance, and Mr. MACBETH has worked chiefly from this drawing, which afforded points of difference, such as high lights in the chapel and almshouse windows, and other points useful for effect in the interpretation by line and chiaro-oscuro. It was somewhat bold to attempt at all the translation of a picture in which there is no positive light and shade—only the tremulous warmth of the after-glow—and which depends for effect much upon the contrast of a long stretch of red roofage with the green-turfed enclosure of the almshouse quadrangle, and yet more upon the apposition of varied high lights in the daisies on the lawn, the milky blossoms of the thorn-tree, the white shirt of the much-criticised mower, and the pale stone of the founder's monument. The painter can vary the hue of



his whites; the etcher can only vary the quantity and quality. It is no wonder that Mr. MACBETH made the stipulation that an interpretation, not a literal translation into black and white, should be expected of him. The sky, which is skilfully graduated, he has darkened to throw out the white-tufted head of the thorn; the tone of the whole plate is darker and heavier—if not positively, yet in effect—than the oil picture, the subdued luminosity of which is so beautiful. On the whole, however, Mr. MACBETH must be congratulated. His manner is somewhat aggressive, his execution apt to be ragged and scratchy, and this plate shows both faults; but there have been great difficulties to surmount, and the interpretation is, on the whole, sympathetic with the restful sentiment of the picture.

A fresh series of special exhibitions at the Fine Art Society's gallery opens with a show of nearly three hundred water-colour sketches by Mr. ERNEST GEORGE. That a practical architect should have found time to produce such a quantity of beautiful drawings appears amazing, and the collection is a testimony to Mr. GEORGE's power and industry; and his quick sense and selection of the picturesque have enabled him to seize upon characteristic features in old Dutch or German towns, French châteaux and churches, streets and monuments of Italian cities, Spanish cathedrals and gates, Scottish "wynds," Swiss lakeside or mountain villages, all with equal enthusiasm and care. But the collection deserves a special notice.

At Messrs. DOWDESWELL's may be seen some hundred small water-colour drawings by Mr. CHARLES ROBERTSON, of the miniature-album sort, which are favoured in this gallery; also a gathering of oil sketches and studies by Mr. GRANT PARTON, whose portraiture of silver birch trees gained him selection by the trustees of the Chantry bequest some years ago, and has since, by its persistence, brought on him certain accusations of monotony. Birch trees are frequent in these sketches, but also trees of various foliage, tumbling streams, too, as well as woodland pools. Mr. PARTON shows, in these outdoor studies, a breadth of manner, firm outline, and richness of palette in common with Mr. ALFRED PARSONS' landscape; it is honest, good work, if of no exalted range, and perhaps a little flat and thin in execution.

### THE "INCOHERENT ARTISTS" EXHIBITION.

THE second exhibition of "les Artistes Incohérents" was opened in the Galerie Vivienne, Paris, on Saturday last, and it will continue until November 20. The invitation card was a skit on the more imposing exhibition of decorative arts in the Palais de l'Industrie. The correspondent of the *Telegraph* says that this year the humour is heavy and grotesque, and the whole exhibition is strongly suggestive of the Morgue. Thus, on the entrance floor of the so-called Salon where the exhibition is held the first thing that strikes the eye is a ghastly and realistic picture of a man dead from hunger. Around are hung fragments of tattered garments, described as "Studies in Pantaloon," or jackets, as the case may be. Over the stairs is a large canvas, on which M. de Lesseps and his children are shown, the polls only of the latter being visible. Sarah Bernhardt is not forgotten; the famous actress appears in various positions; while Theresa, the popular *diva* of the *cafés concerts*, is mimicked by a monstrous and ugly head which hangs suspended from the ceiling of the upper floor. There are a good many pictures of human beings without heads, culminating in one of St.-Denis, who is in the act of shaving that appendage preparatory to escaping with it tucked under his arm, according to the legend. M. Puvis de Chavanne's great picture of *The Wood Dear to the Arts and Muses*, which was exhibited at the Salon, is satirised by an empty panel, to which several pieces of burnt wood are attached. Henri Rochefort is exhibited by Alfred le Petit, who also caricatures M. Hyacinthe, of the Palais Royal Theatre. Coran d'Aché, whose military sketches in the *Vie Militaire* are well known, sends a humorous drawing of Napoleon I. haranguing the 47th Regiment on the eve of Marengo. The great captain's back only is visible, while the colonel of the 47th is bathed in tears, and answers "Yes, sire," to the apostrophic "soldats" with which Napoleon invariably commenced his battle-field speeches. The same picture is again represented under the effects of the snow, Napoleon, the lachrymose colonel, and the troops being dashed with white. A morbid and indelicate picture of Hamlet flying from the dead body of Ophelia disgraces the exhibition, while there are one or two paintings which are really effective. One is intended as a scene from the new ballet at the Eden Theatre. A nymph is represented seated on a rock, while behind her stands her lover, who maintains a half-bandit, half-troubadour attitude. The nymph is brought out into relief by a jet of limelight, the whole being characterised as

"obscurantism cleared by the influence of light." M. Georges Lorin's *Comet* is also a pretty picture. A female figure floats through the air, leaving in her wake a line of light, splendidly coloured. Besides the pictures, a number of grotesque objects are ranged around, which excite curiosity and provoke a smile. There are books with blank leaves, wonderful umbrellas, lumps of baked earth labelled as terra-cotta, and a dozen other humorous combinations, suggested or *en evidence*. Altogether the exhibition, which is redolent of the seamy side of Parisian art life, is curious, amusing, and characteristically French. The exhibition of the "Arts Incohérents" has now entered on its second year, and may probably assume larger dimensions and greater variety in the future.

### MR. RUSKIN'S LECTURES.

THE first of Mr. Ruskin's series of lectures on "The Pleasures of England," as a sequel to those on "The Art of England," was delivered on Saturday in Oxford. The subject of his lecture, which was delivered before a large audience, was "The Pleasures of Learning," from the times of Bertha to Osburga. The Professor said that in the short review of the present state of English art given to the students last year he left, necessarily, many points untouched and others unexplained. The seventh lecture, which he did not think it necessary to read aloud, furnished them with some corrective statements, of which, whether spoken or not, it was extremely desirable that they should estimate the balancing weight. Those he proposed in the present course further to illustrate, and he hoped to open up to them the prospect of such a future of England as even the moral philosophy at this moment current had never perceived—such a future as they might both cordially and hopefully labour for, and those of them who were spared for the ordinary term of human life might even see with their own eyes, when all this tumult of vain avarice and pleasure shall have passed into its appointed perdition. The pleasure of learning, in the sense of receiving instruction, was a pleasure totally separate from that of finding out things for oneself, and was an extremely sweet and sacred pleasure when one knew how to seek it and to receive it. He propounded the question what our people would have made of themselves, and what sort of being the Saxon, the Celt, the Frank, and the Dane might have been at this time, untouched by the influences of other nations. He asked them to think of it, and to think chiefly what form the ideas and images of our national religion might have probably taken if no Roman missionary had ever passed his life in charity and no English king in pilgrimage. Of the impetus it was possible for any barbarous nation to receive during the first five centuries, either from the spiritual power of Christianity itself or the instruction in Classic art and science which accompanied it, one could not readily judge without taking the pains—and they would not, he thought, be irksome—of noticing carefully and fixing permanently in their minds the separate characteristics of the greater graces both in those who learned and in those who taught. Quoting from a lecture by the late Dean of Canterbury, in 1854, on the subject of the landing of Augustine, Mr. Ruskin, amid laughter, described the passage quoted as a Gregorian chant in praise of the British Constitution, to which he would take a few historical objections. Criticising the passages in question, he remarked that the Christianisation of Germany was by no means owing to English missionaries; our mission in regard to America, in practice, consisted chiefly, he believed, of stealing land and the extermination of its inhabitants by intoxicants; our rule in India had introduced there Paisley shawls instead of Cashmere; and he believed that the principal prospect from St. Martin's Hill, Canterbury, would not be thought by even the most cheerful of his audience to be one of the most inspiring in the world, for recent progress had entirely accommodated the architecture of the scene to the convenience of the present instincts of English civilisation, and the cathedral, the monastery, and the history in the tomb of Bertha reposed in base subservience under the colossal walls of the all-invincible county gaol.

### INFLUENCES OF ENGLISH SCHOOLS OF ART ON MANUFACTURES.\*

IF we regard the schools of art under their original designation as essentially schools of design, it cannot be doubted that they have had a most useful past; and, in anticipation of a still more useful future, attention may be drawn to the large proportion of schools to be found in towns where design is of the first importance to the success of the local manufactures. Moreover, information as to the employment of ex-students as designers has been sought at the various schools, and although in several cases they were stated to be so numerous that a list of names could not be attempted, and in almost all the record was dependent on the imperfect recollection of the master, extending sometimes over a very limited period, lists of names have been received showing that

\* From Mr. Sparkes's Exhibition Handbook.



many hundreds of men and women trained in the schools are at this moment engaged in the work of designing, not only in England, but also in France, Russia, Spain, America, Australia, New Zealand, India, the Cape of Good Hope, &c., and at home they have in many places superseded foreign designers.\* At Sheffield, for example, a dozen French designers and artist chasers were in 1852 the chief authorities on design and taste, and their work was mostly of a depraved Louis Quatorze character. The manufacturers being indifferent to art, the designers were absolute in their control, and the public, beguiled by richness of treatment, made no objection to the style then in vogue. Ten years later these foreign modellers and designers had been supplanted by Englishmen, and this change was greatly due to the influence and genius of the late Alfred Stevens. Having gone as a boy to Italy, Stevens spent thirty years there, and on his return to England obtained employment as one of the masters at Somerset House. On the reorganisation of the school he found it necessary to seek employment, and a Sheffield manufacturer had the wisdom to secure him as his chief artist, on the recommendation of Mr. Young Mitchell, the head-master of the local school of design. Mitchell and Stevens became fast friends, and the latter thus exercised an indirect influence over the school, for the accommodation of which a new building was erected at great cost. The School Committee was originally composed of *dilettanti*, the manufacturers being conspicuous by their absence; but now the latter take their full share in the government of the school. There is not a single French designer in the town, only two French chasers, and the leading manufacturers (especially those who produce the most artistic works) and general public are greatly interested in the school, many past students of which are occupying honourable positions elsewhere. In Nottingham, twenty years ago, the lace designs, most of which were produced by foreigners, were as a rule lamentably deficient in artistic taste, although there were some good ones amongst them. Sprawling palm-trees, nondescript flowers, and absurd ornaments, were huddled together in ugly confusion, and any attempt to leave the beaten track was regarded with disfavour, except by the Science and Art Department, which afforded great encouragement by its favourable recognition of good work. A school of design was established in Nottingham in 1843, but very little attention was given to the staple manufacture till 1866, when the school secured the services of a master who established special classes for the study and practice of design. After a time he conceived the idea of basing his pupils' work on good specimens of old hand-made lace, English and foreign, which were modified to suit the capabilities of the machine, and this in its turn was improved so as to be capable of producing larger designs for curtains, &c., without "repeats." The students were encouraged by money prizes to do their best, and from that period may be dated the extraordinary progress made in the Nottingham lace trade. It was soon found that native talent was quite equal to all the requirements of this beautiful manufacture; periodical competitions in design were stimulated by local prizes; English designers gradually superseded foreign artists; and in 1878 the undoubted merits of their work received recognition in the French capital itself, in the shape of a "diploma of honour" from the Paris Exhibition. One of the leading manufacturers of Nottingham, a warm supporter of the school of art, states that, whereas only ten years ago he paid from 1,000*l.* to 1,200*l.* a year for French designs and to French designers, his present expenditure in that direction is not more than 50*l.* Probably 1,500 young men are now engaged in that town as designers and draughtsmen, with such success that in Calais, the chief seat of the French lace trade, the manufacturers last year petitioned the Government to assist them in establishing a school of art there, lest they should be left behind in the competitive race. Many of the Nottingham manufacturers compel their apprentices, by a clause in the indentures, to attend the school of art three times a week—a course which is more or less adopted in Aberdeen, Bath, Barrow-in-Furness, Hanley, Preston, and other places; indeed, the school is one of the most popular institutions in the town, and has, moreover, an invaluable adjunct in the museum established in Nottingham Castle. One firm alone pays as much as 5,000*l.* a year to seventy designers, including apprentices; and though many designs are still sent over from Paris, they are always put into the hands of English draughtsmen before being put on to the machine. At Macclesfield, where the silk manufacture is the staple industry, the business of hawking French designs is gradually dying out, and only the other day a dealer in these commodities offered one of the students of the School of Art regular employment in sketching and designing, besides which it is well known that a large percentage of the "new French patterns" which arrive quarterly from Paris are really the production of English looms. The Macclesfield school is indeed found to be indispensable to the manufacturers of the town, amongst whom may be found seven or eight ex-students; and the designers

trained therein work also for the cotton, linen, silk, and woollen textiles of other towns. Designs are wanted for almost everything that Macclesfield produces, and it is found here, as elsewhere, that the school course provides higher standards of excellence than are demanded by the customers for whom the manufacturers have to provide. The ability of the students is, however, utilised as fast as they can be trained, and it is expected that the demand will be further stimulated when a technical school is also established, and gives instruction side by side with its artistic neighbour. At Belfast the artisan classes are most numerous attended, and the trades of the town, including linen damask weaving, cotton printing, embroidery, ironwork (wrought and cast), lithography, and engraving, have all been directly benefited; most of the designers have been trained therein, several having also had the advantage of a course of study at South Kensington; and the students include a large number of persons employed in the establishment of Messrs. Marcus Ward & Co. It is, however, regretted that the staple production of the town (linen damask) has not been more largely affected by the work of the school, for though the patterns show a marked improvement, many of them are still execrably bad. A local museum of art objects, and especially of textile fabrics, is greatly needed, for the place is singularly devoid of artistic objects and influences, and as the Free Libraries Act has recently been adopted by the town, it is hoped that steps will soon be taken to establish such an institution. At Birmingham great strides have been made in art-manufactures during the last thirty years, public taste has been largely developed, and designers and art workmen trained in the school of art are now generally employed. Here, owing to the nature of the trades carried on, there is a great demand for good handicraftsmen, and one of the principal firms, which formerly employed many foreign designers, modellers, chasers, &c., now relies almost exclusively on native ability. At Coalbrookdale the modellers and most of the designers for ironwork are or have been students of the school of art, and the same may be said of the tile factories of Messrs. Maw and others. At Glasgow the majority of those filling important posts in the factories have had the benefit of its training, and it is to be hoped that the town will not allow an institution of great value to its manufactures to continue so badly housed as it is at present. At Manchester some of the manufacturers are earnest supporters of the school, but complaints have been made that its work is not sufficiently comprehensive, being at one time too exclusively an art school, and at another, too much a school of design: it is, however, now making good headway, and increasing its hold on the estimation of the public. At Stoke-on-Trent the school of art had in its earlier years, a staunch and generous supporter in Mr. Herbert Minton, who insisted that his apprentices should attend its classes, and paid the fees of the girls during five years of their apprenticeship. His successors still insist on the attendance of the boys, and the school has turned out skilful workmen for the factories in large numbers, besides which ex-students are to be found in the several establishments, engaged as directors, painters, or designers, and in many cases they have superseded foreign aid. Pottery painting at Stoke has entirely changed its character since the establishment of the school of art, so far as its technical treatment is concerned, and the school has produced hosts of art-workmen. At Halifax, sixteen years ago, all the principal appointments as designers were held by foreigners; now, however, matters are altogether changed, for they are almost exclusively filled by ex-students from the school of art, which is also largely attended by youths whose business it is to transfer to "point" or squared paper the designs of their masters, so that a thorough acquaintance with freehand drawing is highly essential to success. At Lambeth a most important and extensive art-manufacture owes its very existence to the influence of the neighbouring school of art, cordially welcomed and allowed free scope through the enterprise and encouragement of Messrs. Doulton, whose art-pottery is distinctly original in conception and treatment. The Lambeth school always had a class of design, and about the year 1865 it occurred to Mr. Sparkes, then its master, that the students might as well make their designs in enamelled colours on the clay used for making tiles and other coarse ware, as upon paper in water-colours. He thought this course would add interest to the work, but had no conception of the extensive industry to which the experiment would lead. This beautiful and popular ware, as Mr. Sparkes observed in a lecture delivered in 1880 at the Society of Arts, is—

"A most excellent result of a genuine experiment made with the capital and artistic taste of a manufacturer, developed by purely local means. No local school in any part of the Continent could have done more than the Lambeth school has done to back up by its best efforts the demands made from time to time by Mr. Doulton. . . . It is a truly national production, and at the same time a local one, the direct outcome of the proper co-operation that ought to exist between schools of art and local manufacturers."

\* It has been suggested by Sir Philip Owen that an official list of students who have passed through the schools, showing the certificates they have gained, should be periodically published, and this might be made the medium of much useful and interesting information.

This modern development of industrial art, in which some 350 persons are employed, mostly females, could not have taken place but for the neighbouring school of art, which has supplied, almost without exception, the entire staff of the establishment, and con-



tinues to have the warm support of Messrs. Doulton, who, as one means of encouragement to the students, arrange that every certificate gained at the school shall carry with it an increase of salary. The school of art at Stourbridge, also, has had much influence on the glass manufactures of the district, and appears to have founded one important branch—etching on glass—which was started about twenty-five years ago. Cameo glass cutting has also been recently introduced, and great strides have been made in this as well as in other departments of the trade. In support of this statement the following passage may be quoted from an address delivered by Sir Rupert Kettle at the last Social Science Congress :—

“Without speaking of the special manufacture revived in Venice, I can say with confidence that no country has at any time produced such pure brilliant flint glass as the English makers now give to the world. As to design, whether in cut, engraved, or moulded glass, whether in rock, crystal, or cameo work, no such art-glass was ever before seen as that which is now being produced in my own neighbourhood.”

Notwithstanding such testimony as this, it has been objected that schools of art have hitherto but imperfectly accomplished their aim in the application of design to the manufactures of the country—that they have not been sufficiently technical in their teaching. But it should be borne in mind that technical work has always been discouraged by Parliament, on the ground that the public money must not be employed to subsidise trade in any way, and has also been strenuously opposed by manufacturers—who are now clamouring for its greater encouragement—and therefore schools that have developed into technical schools have done so on their own responsibility, and solely by means of their own pecuniary resources; those works only have had any claim to Government reward or encouragement which were strictly within the limits of the art directory, quite irrespective of questions of technique. It should have been mentioned that at one time a Jacquard loom was introduced into the schools, and from time to time various attempts have been made to establish classes for wood-engraving, chromo-lithography, pottery, &c.; but as soon as these reached the point at which they became useful it was thought expedient to restrain their operation, because of possible interference with trade.

## THE GLASGOW INSTITUTE OF ARCHITECTS.

THE annual general meeting of the Glasgow Institute was held on Tuesday—Mr. James Thomson, F.R.I.B.A., President. The following report was read by the Secretary :—

The Council beg to submit the sixteenth annual report on the affairs of the Institute. One new member has been admitted during the year—viz. Mr. Thomas Turnbull, architect, Wellington, New Zealand.

The competition for the War Office and Admiralty Buildings in London was again under the notice of the Council. Communications were received from the secretaries of the Royal Institute of British Architects, and from Mr. Horace Jones, architect for the Government, referring to the suggested modifications of the “instructions of architects” in the competition, and the advisability of printing these communications was considered, but it was resolved not to do so.

The draft of a proposed Building Act separate from the Police Bill having been drawn up and submitted by the president, a committee was appointed as to the matter, in order that the views of the Institute on the subject might be laid before the Lord Advocate. After various meetings and discussions the draft was printed and a copy sent to each member of Council. At several meetings of Council the draft was gone over and revised, and it was then determined to have the revised draft printed and a copy sent to all members of the Institute. While the draft was under consideration the secretary wrote to the Lord Advocate informing him that a draft Building Act was in course of preparation, and that when completed a copy would be sent him with the view of having another interview with him on the subject. A reply was received from his lordship intimating that he would have pleasure in again meeting a deputation from the Council and going over the draft with them. Thereafter the draft Act was considered and adopted at a meeting of the Institute, and Messrs. James Thomson, president, Campbell Douglas, and John Honeyman, past presidents, were appointed a deputation to wait on the Lord Advocate and confer with him on the subject. It was agreed that while a separate Building Act would be most desirable, yet, if absolutely necessary, rather than have delay they should agree to the Building Act forming part of the proposed Burgh Police and Improvement (Scotland) Act. A copy of the draft was forwarded to the Lord Advocate, who fixed a time to receive the deputation; but as he was unexpectedly called to London, where he was detained until the opening of Parliament, the intended meeting did not take place.

The Burgh Police and Improvement (Scotland) Act having in the previous session of Parliament failed to pass the House of Commons, a new Bill was brought in by the Lord Advocate in the

course of last session. A copy of this Bill was obtained and discussed, when it was found to be, so far as the architectural and other kindred clauses were concerned, substantially a reprint of the former Bill, no effect having been given to the suggestions of the Institute. The Bill was referred to a Select Committee of the House of Commons, and it was ascertained that the only way in which the members of the Institute might now have effect given to their suggestions was to forward a written statement of these to the members of Committee. A copy of the draft prepared by the Institute was accordingly forwarded to several members of the Committee, but owing to the Bill having been dropped by the Government no legislation has yet taken place.

The Committee have given much attention to the examinations in architecture, held in Glasgow in February, under the auspices of the Royal Institute of British Architects. The Council and the past presidents were appointed a Committee to take charge of the examination. In this they were assisted by Mr. Arthur Cates, chairman of the Board of Examiners, and Mr. J. Macvicar Anderson, honorary secretary of the Royal Institute of British Architects. The following is the Report by Messrs. Campbell Douglas and T. L. Watson, the conveners of the Committee :—

An examination in architecture qualifying for Associateship of the Royal Institute of British Architects was held this year in Glasgow, under the charge of the Board of Examiners of the Royal Institute and a Committee of the Glasgow Institute.

Six candidates presented themselves for the examination, which was begun on Monday, February 25. Four days were devoted to a written examination of the history and details of different styles of architecture, sanitary science, strength of materials, construction, shoring, and professional practice. The work included also the preparation of a design for a public library, with details and specification.

On Friday, February 29, the oral examination took place, and lasted from 10 A.M. to 6 P.M., with a brief interval. It was conducted by Mr. Arthur Cates, chairman of the Board of Examiners of the Royal Institute of British Architects; Mr. Macvicar Anderson, honorary secretary Royal Institute of British Architects; and the Committee of the Glasgow Institute.

The following were the successful candidates :—Messrs. James Ledingham, 1 New Ivgate, Bradford; Alexander McGibbon, 8 Douglas Street, Glasgow; James A. Williamson, 2 West Preston Street, Edinburgh; and Alexander B. Wilson, Brisbane, Queensland.

This examination in architecture is the first that has taken place in this country out of London.

The Council think that these examinations will prove very beneficial to the profession, and hope that a large number will come forward when the next examination is held.

The President and Mr. John Burnet were re-elected trustees of Haldane's Academy of the Fine Arts.

The Committee (Mr. Sellars, convener) appointed to consider the rules and regulations for the measurement of mason work in this district, or wherever the Glasgow mode of measurement is adopted, have completed their work and reported to the Council. They had before them the draft rules prepared by the Institute, those prepared by the Institute of Measurers and by the Master Masons' Association. After careful consideration of the three sets of rules, the Committee found that, except in a few instances, there are no serious differences in the rules as prepared by the three bodies, and they recommend that representatives of the two Institutes and the Master Masons' Association should meet to discuss and, if possible, agree on one set of rules, so that uniformity of practice in regard to this important matter may be secured in the future. In order to facilitate the work of this proposed conference, the Committee prepared a statement showing in parallel columns the rules applicable to the measurement of each department of mason work as suggested by the three bodies. Representatives from the Institute have been appointed, and the Institute of Measurers have been communicated with, but their reply has not yet been received. The table of fees issued by the Glasgow Institute of Measurers has also been considered and reported on by the Committee of Council—Mr. Sellars, convener—appointed for that purpose, and a communication has been sent to the Institute of Measurers.

The annual dinner of the members and friends of the Institute took place in the St. Enoch Hotel in February. Among other guests, there were present Mr. Arthur Cates and Mr. J. Macvicar Anderson, from London. An interesting address was delivered by Mr. James Thomson, the president, and a very pleasant evening was spent.

A communication was received by the Council from the Royal Institute of British Architects asking information as to the law and practice of Scotland as to light and air, and whether the present position of matters was found satisfactory. The matter was remitted to the secretary's firm, who prepared a report on the subject, which was forwarded to the Royal Institute of British Architects, and duly acknowledged by them.

The annual excursion of the Institute took place on Thursday, September 25, to Dalmeny Church, Hopetoun House, and the Forth Bridge. The party started in the morning from the Central Station, and arrived at Merchiston about eleven o'clock. From Merchiston they drove to Dalmeny church, where nearly an hour was spent examining this interesting building. Lunch was taken



in the well-known Old Hawes Inn at South Queensferry, and the party then drove on to Hopetoun House, the seat of the Earl of Hopetoun. The fine collection of paintings and other works of art here, and the building itself, were examined with great interest. About half-past three the party arrived at the Forth Bridge works, where they were met by Mr. Arrol, and the rest of the afternoon was spent in a careful examination of the undertaking. A drive to Edinburgh, and dinner in the Windsor Hotel, closed the excursion, and the party returned by an evening train to Glasgow. The weather all day was delightful, and a most enjoyable and instructive day was spent.

At a meeting of the Alexander Thomson Memorial Trustees, held in October 1884, it was reported that a suitable investment had now been found for the Trust funds, and Mr. John Shields was appointed factor and secretary to assist the Trustees in the administration of the Trust.

The Council recommend that the members of the Institute use their best endeavours to increase the membership of the Institute, and thereby enlarge its influence.

On the motion of the President, seconded by Mr. M'Gibbon, the report and treasurer's statement were unanimously approved of, and ordered to be printed and circulated among the members.

On the motion of the President, and seconded by Mr. Campbell Douglas, the following gentlemen were unanimously elected to be members of council for the ensuing year:—James Sellars, jun., William Landless, Hugh Barclay, John Gordon, John Murdoch, Robert Turnbull, T. L. Watson, David Thomson, James Thomson, Alexander Skirving, Wm. F. M'Gibbon.

On the motion of Mr. Campbell Douglas a cordial vote of thanks was awarded to Mr. James Thomson, the retiring President.

At a meeting of council, held after the general meeting, the following were elected as office-bearers:—Messrs. James Sellars, jun., 266 St. Vincent Street, president; Hugh Barclay, 136 Wellington Street, vice-president; William Landless, 227 W. George Street, treasurer; John Burnet, 167 St. Vincent Street, auditor; William Maclean, 81 Bath Street, secretary.

### SHAKESPEAREAN ARCHÆOLOGY.

A LETTER has been printed in the *Times* from Mr. H. Schütz Wilson on the costume and appointments of "Hamlet," which suggests the difficulty of deciding how far archæology should be employed on the production of Shakespeare's plays. The writer says:—The fact that Shakespeare's tragedy of "Hamlet" has once more been produced at a leading London theatre will, I hope, furnish me with an occasion of again arguing that this play should be costumed in the dress of the days of Elizabeth; in the dresses in which, doubtless, the play was first played; in the costume worn by Shakespeare, Spenser, Sidney, Raleigh. Shakespeare has made use, as a hint or suggestion, of a story suitable for his dramatic treatment, of the old legend concerning Amleth, as recorded by the old chronicler Saxo Grammaticus; but Shakespeare was a great poet and not a small archæologist, and his ideal tragedy does not, in very essence, belong to any age more strongly than that in which he conceived and wrote the immortal play of "Hamlet," which contains no essential characteristic of any day before that on which it was produced. Shakespeare has employed the thoughts, the manners, the philosophy, the poetry of his own time; and nothing is gained by moving the objective presentment of this drama backwards to the date of the dim old chronicle. Shakespeare, so to speak, thought out "Hamlet" in the dress of the spacious times of great Elizabeth; times already so far remote from our own that the habits of the men that then lived suffice amply for true dramatic illusion and for ideal vesture. When we see "Hamlet" we want nothing of the literal old Denmark of the chronicle—Shakespeare wanted nothing of that. He has caught from it only the idea, the suggestion, of a moving story, which he has so elevated by his treatment of it that it now belongs wholly to the pure abstract ideal; and our highest English dramatic ideal is that of the great day of Shakespeare himself. Surely the costume of the Elizabethan age is picturesque, and should be very dear to English fancy. While we gain nothing by setting the play back, we lose much, very much. We bring the mounting of the tragedy into direct antagonism with, at least, the manners depicted. Take a few instances. Were "counterfeit presentments" known when Saxo Grammaticus wrote? Was there then a company of travelling players, with a lad who played female parts? Could Amleth have felt that "a forest of feathers, with two Provincial roses on his razed shoes," would have got him a fellowship in a cry of players? Would Amleth have heard of an eyrie of player-children, little eyases, that were in Shakespeare's day the fashion? Could Amleth, or any man of his day, have thought those sublime thoughts about death and that which may come after death which Shakespeare gives to Hamlet to think?

One other point—a most important one—remains to be noticed. Shakespeare's Hamlet wears a rapier. When Hamlet "makes a pass through the arras" and kills Polonius, the pass is made with a rapier. The Queen says that her son "whips out his rapier" when he kills "the unseen good old man." For the

fencing wager the King imposes, as I take it, "six French rapiers and poinards, with their assigns, as girdle, hanger, and so on; three of the carriages, in faith, are very dear to fancy." The point need not be too much laboured, but it may well be asked if the art of *escrime*, which, in Shakespeare's day, Rowland Yorke was teaching to all the young nobles and gallants of London, was known in the days referred to in the chronicle?

Ophelia speaks of—

"The courtier's, soldier's, scholar's eye, tongue, sword;  
The expectancy and rose of the fair state,  
The glass of fashion and the mould of form."

Are such attributes proper to the times which Saxo Grammaticus records?

Can theatrical absurdity be pushed much further than to see a Hamlet who, through all the play, has worn a kind of short Roman sword, play a fencing match with the foil, or *fleuret*, which was the practice weapon for the rapier? By the way, the fencing match should be played with rapier and dagger.

It may be hoped that the next manager—Hamlet is now generally acted by managers—who revives this play of never-ending interest, will cease to grope dimly after the imperfectly-known costume of a very barbarous time, and will prefer to give us the graceful and romantic costume which suited, and which suits, the manners which Shakespeare depicts, and which belongs to the noble time in which the tragedy was conceived and produced. A Hamlet should never (if he can help it) be vulgar.

### BILLINGSGATE APPROACHES.

A MEETING of the City Commission of Sewers was held at Guildhall on Tuesday, Mr. Rose-Innes, the chairman, presiding. Mr. L. H. Phillips moved that in the opinion of the Commission the new diagonal street from the Monument to Lower Thames Street would not be required, considering that the opening of the street to Trinity Square would answer every purpose for the traffic, and that the several resolutions and orders in favour of making the diagonal street be accordingly revoked. Mr. Mathew seconded the resolution. Colonel Haywood, the engineer, in reply to questions, stated that the cost of the street would be about 336,000*l.*, and all the notices had been served upon the leaseholders and freeholders—50 in all. Of these 29 had sent in claims amounting to 238,000*l.*, and the agreements to purchase in some cases had been completed. Mr. Tickle urged that it would be absolutely impossible for a public body like the Commission to withdraw from its agreements in the way proposed. Mr. Alliston said the new street would be for the benefit of the riverside traffic, and the fruit and other trades, besides that of the fish-market, would be largely facilitated. That particular part of the city had been shamefully neglected of late, and the new street would be only a measure of justice. Mr. J. T. Bedford opposed the construction of a street which would burden the ratepayers of the City with a rate of 2*d.* in the pound for the next 30 years. Mr. Lyon, on the other hand, said that 2,000 vehicles passed to or from the Monument to Billingsgate daily, and the improvement was one which ought to be carried out without delay. After some further debate, the resolution of Mr. Phillips was negatived by 28 votes to 18.

### PROTECTION FROM FIRE IN THEATRES.

THE owners of the Marylebone Theatre were summoned by the Metropolitan Board of Works, at the Marylebone Police Court, on Monday, for that they, between the 28th day of February and the 29th day of July, neglected to make certain alterations necessary to remedy structural defects in the theatre, by which danger from fire might result to the public, after having been served with notice to do so. Mr. Grain, instructed by Mr. Thos. Burton, appeared on behalf of the Board, and Mr. Besley represented the owners. Mr. Grain stated that the requisitions served were seventeen in number, and the owners had neglected to carry out ten of them, some of these being of a most important character. The proceedings were taken under the 41 & 42 Vic. cap. 32, sec. 11, which imposed a penalty of 50*l.* in case of default, and 5*l.* for every day during which such default continued. No notice of appeal having been served, the requisitions became binding upon the owners, and Mr. Hebb, assistant-architect to the Board, was called in support of the Board's case.

Mr. Besley, for the defence, contended that the requisitions of the Board had been complied with as far as was practicable, and called Mr. Thomas Verity, F.R.I.B.A., in support of his statement.

The magistrate, Mr. De Rutzen, said the Act of Parliament was a most important one, and ought to be strictly carried out, and that he had nothing whatever to do with deciding whether or not the requirements of the Board were necessary. His duty was merely to impose a penalty, to show owners of such places as theatres that the requisitions of the Board must be complied with in the interests of the public. He should not impose the full penalty of 50*l.*, but a mitigated penalty of 10*l.*, including costs.



## NOTES AND COMMENTS.

It will be remembered that England is represented by Professor KERR on the International Jury to whom the selection of the designs in the competition for the Amsterdam public buildings has been entrusted. In consequence of a prohibition by his doctor, Professor KERR has been compelled to resign his position on the Jury, and Mr. R. PHENÉ SPIERS has been appointed to be his successor. It would be ridiculous to question Mr. SPIERS's capabilities for the office. A man who has drawn and studied almost every building in Europe which has any merit should be competent to know good from bad architecture, and a host of past and present Academy students would be found prepared to testify to Mr. PHENÉ SPIERS's impartiality and sense of honour. Indeed, it has been to us a wonder that his services have not been more often secured by public bodies as an assessor in architectural competitions in this country.

THERE is no competitive examination to test the capabilities of art critics, and it is sometimes assumed that every novice is qualified to discover the weak points in the works of the best painters. A country reporter lately sought Mr. RUSKIN's advice as to how he was to deal with an art exhibition when he was without any special knowledge of art. Mr. RUSKIN, in replying, said: "Supposing—which I hope your question does suppose—the country reporter to be a man of natural sense and intelligence, the best thing that he can do is to describe carefully the subjects of the pictures he thinks likely to please simple people, if they are shown what is in them, and, as far as the editor will allow him, to take no notice of pictures attracting merely by their tricks of painting. I do not think the public value the affectations of art knowledge in a newspaper reporter, but they would always be grateful to him for the indication of elements of interest in a picture which they would have missed without his help." Would it not have been more just to the artists who paint pictures if Mr. RUSKIN advised the country reporter to refrain from indicating elements of interest until he had attained, by study, some elementary notions of art? If a similar question had been put to the late THOMAS CARLYLE, we can imagine what kind of reply must have followed.

It is anticipated that in the course of the ensuing term there will be almost constant grumbling about the lighting of the Courts of Justice. Some new machinery for the electric lighting has been introduced, and, instead of being placed in the vacant ground attached to the Courts, it has been introduced into a cellar under the main entrance. It is possible that all will be in working order before the dark days of November; but, to anyone who has observed the rate of progress during the past month or two, that result is not so clear. In descriptions of the old Courts at the beginning of the century, one reads of the impressive effect which was produced when STOWELL or GRANT or some other of the great judges commenced the delivery of a judgment in a dimly-lighted court. The darkness was supposed to give additional awe to the occasion. Who knows but that modern judgments might become more effective if they were heard by jurymen and the auditory in the galleries, while the Court was in a state of semi-darkness?

A PROCESS was described lately before one of the French societies which might be found useful in offices where amateur photography is not entirely unknown. It is called "photocalk," and appears to be adopted in official departments whenever a plan which is engraved or drawn is made the basis on which some other is to be constructed. Thus, for example, it may be an advantage to use a closely-engraved ordnance sheet in preparing a map of a railway or other project; but when the new work is laid down there is a difficulty in removing those parts which are superfluous. In such a case it is proposed that a photograph of the sheet should be taken upon salted non-albumenised paper. The print is not toned in the gold bath, but is dried after a simple fixing by hyposulphite. On it the draughtsman can lay down his details in ordinary Indian ink. The plate is then immersed in a bath containing  $1\frac{1}{2}$  parts of bichloride of copper to 10 parts of water, when all but the new lines will disappear. It is afterwards washed and treated with hyposulphite of soda, and finally bleached by means of cyanide of potassium. If several copies are required, the print has to be transferred to stone or zinc.

There is room for some process of the kind; and the improvements which have been made in reproductions of ordinary writing suggest that something will yet be done of a similar kind for draughtsman's work.

THE Executive Committee who have been appointed to take charge of the fine art section at the Wolverhampton Exhibition after the closing of the industrial department on the 31st inst., have decided to ask each of the guarantors to guarantee 5,000*l.*, instead of 500*l.*, the sum originally fixed upon. They state that they do not anticipate there will be any loss in carrying on the exhibition, but that they merely wish a form of protection against the remote contingency from damage from any other cause than fire, which latter will, of course, be covered by insurance. The Fine Art Exhibition is to remain open for three months, and many exhibitors have given their consent to a detention of their pictures during that period.

ARTISTS and tourists who propose to visit the district between Vigo and Pontevedra, in Portugal, where scenery is to be found that will repay a long journey, will be glad to hear that the line of railway between the towns is nearly completed. They will, in consequence, have many advantages in travelling which were formerly denied them, in the way of quick transit and freedom from being crowded with uncongenial companions in a dirty and lumbering diligence. The new line will be also a great boon for the carrying of merchandise *en route* to Santiago or Compostella.

THE men who are least likely to suffer from remorse are those who carry off antiquities from public and private collections. It is therefore worthy of being recorded that one of the class has a conscience which retains its capacity of making its owner uncomfortable. Aston Hall, near Birmingham, was lately deprived of a few articles, including a dagger and a bayonet. On Monday a platelayer found on an embankment near the Soho Station a parcel which contained the stolen treasures. They were accompanied by the following brief note:—"I hope to be forgiven. I took these from Aston Hall. The finder will please restore them." The culpable archaeologist, we suppose, parted with the parcel because of the difficulty of disposing of the goods; but, whatever may be the motive, it would be well if he found imitators.

THE Trustees of the Rhind Lectures have acted wisely in requesting Sir SAMUEL FERGUSON, Q.C., to deliver a course on "Ogham Inscriptions." It is not often that a lawyer attains eminence as an archaeologist; but Sir SAMUEL is the president of the Irish Academy, which has done much for the preservation of Irish antiquities and for the promotion of research. He is also a poet, and his reputation is not confined to Ireland. In almost every book of extracts the stirring "Forging of the Anchor" finds a place. It first appeared in *Blackwood's Magazine*, and "CHRISTOPHER NORTH" then foretold that the author would be again heard about. Edinburgh is now realising the prophecy.

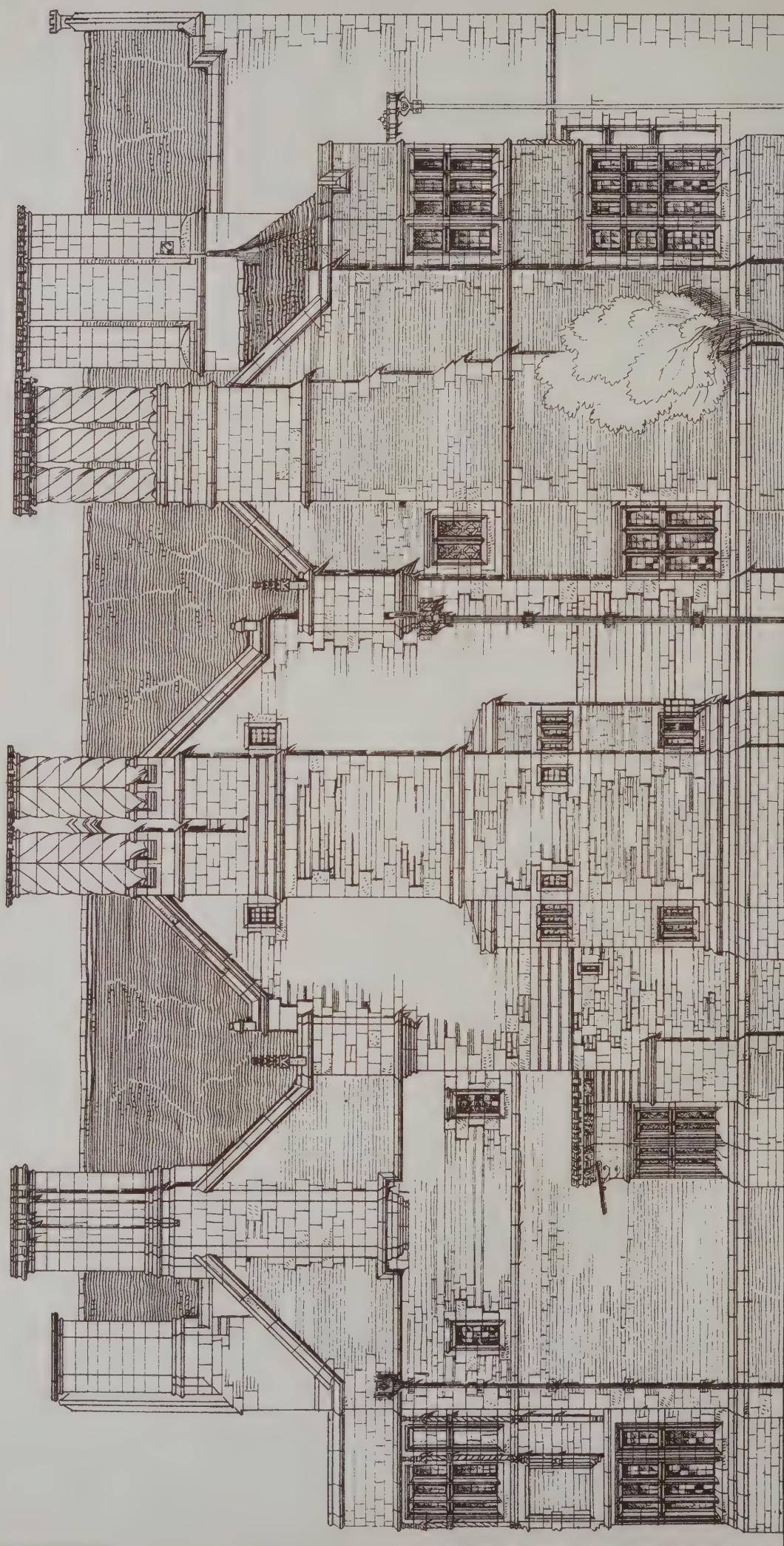
AN important compensation case has been decided in Scotland. The Glasgow and South-Western Railway Company required land at Greenock on which a saw mill stood for one of their extensions. The sum of 25,000*l.* was offered in compensation; the occupier claimed 37,634*l.* After a trial, in which some of the foremost counsel were engaged, the jury assessed the damages at 27,899*l.* 4*s.* 8*d.* The land was valued by them at 23*s.* 6*d.* a yard, 10 per cent. was allowed for compulsory sale, 7,134*l.* for the buildings and machinery, and 3,127*l.* compensation for loss of business.

THE general depression of the building trade continues to be felt by the timber merchants in the North of Europe. It is reported from Christiania that last year was more unfavourable than even the preceding years to forest owners and shippers. Prices abroad fell steadily. The bad state to which the Norwegian timber trade has been reduced is undoubtedly due to over-production, which, however, will be checked by continued low prices. There are no symptoms of any increased demand abroad, and it is therefore to be desired, in the interest of all who are concerned in the trade, that the winter felling of trees in all timber-producing countries should be somewhat restricted. Building materials of pine declined most in price, owing to the increased competition of American spruce.









SOUTH ELEVATION

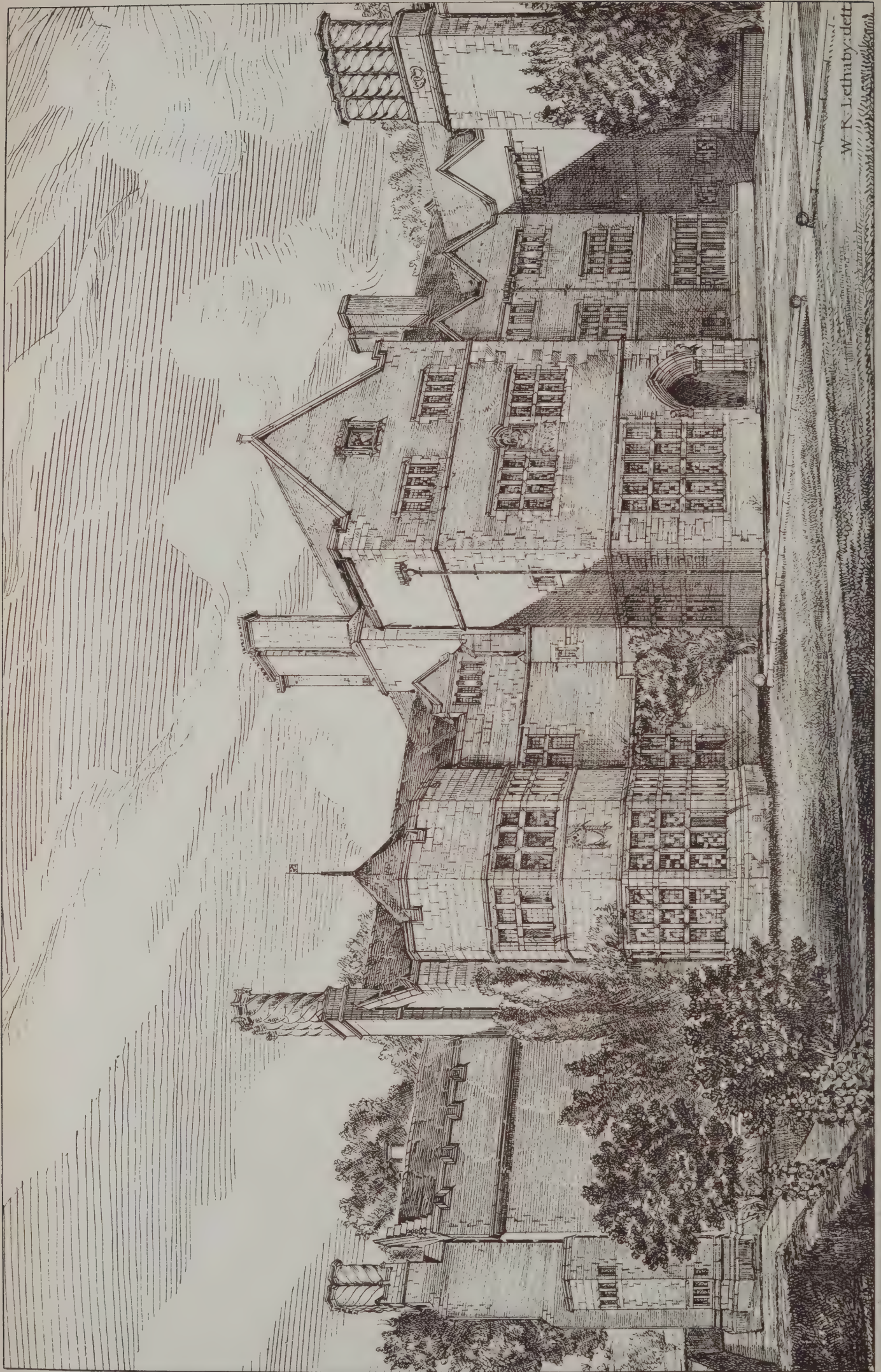
DAWPOOL, CHESHIRE.

R. NORMAN SHAW, R.A. } ARCHITECTS.  
J. F. DOYLE,









DAWPOOL, CHESHIRE.

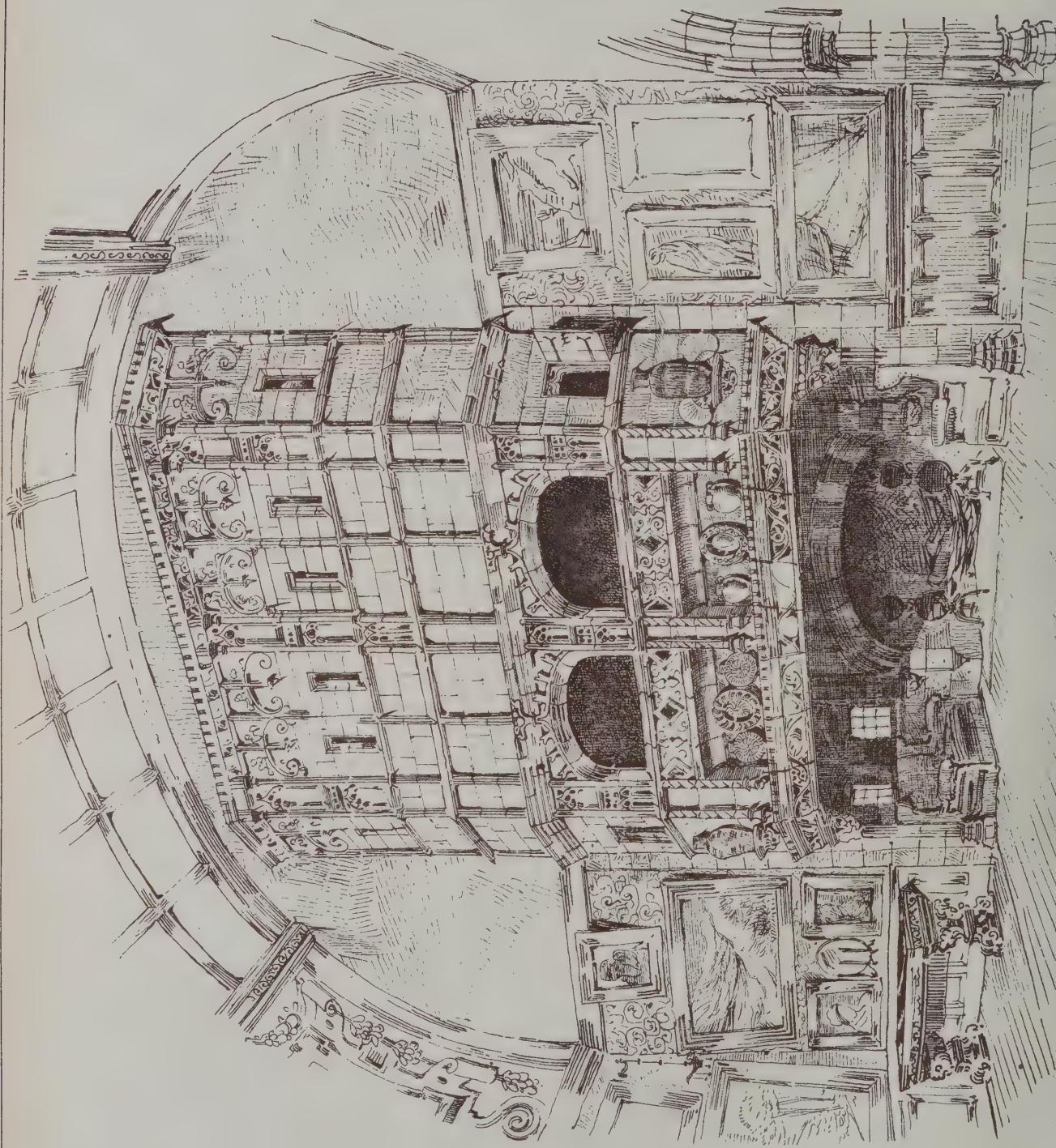
THE ENTRANCE FRONT.

R NORMAN SHAW, R.A. } ARCHITECTS  
J F DOYLE }









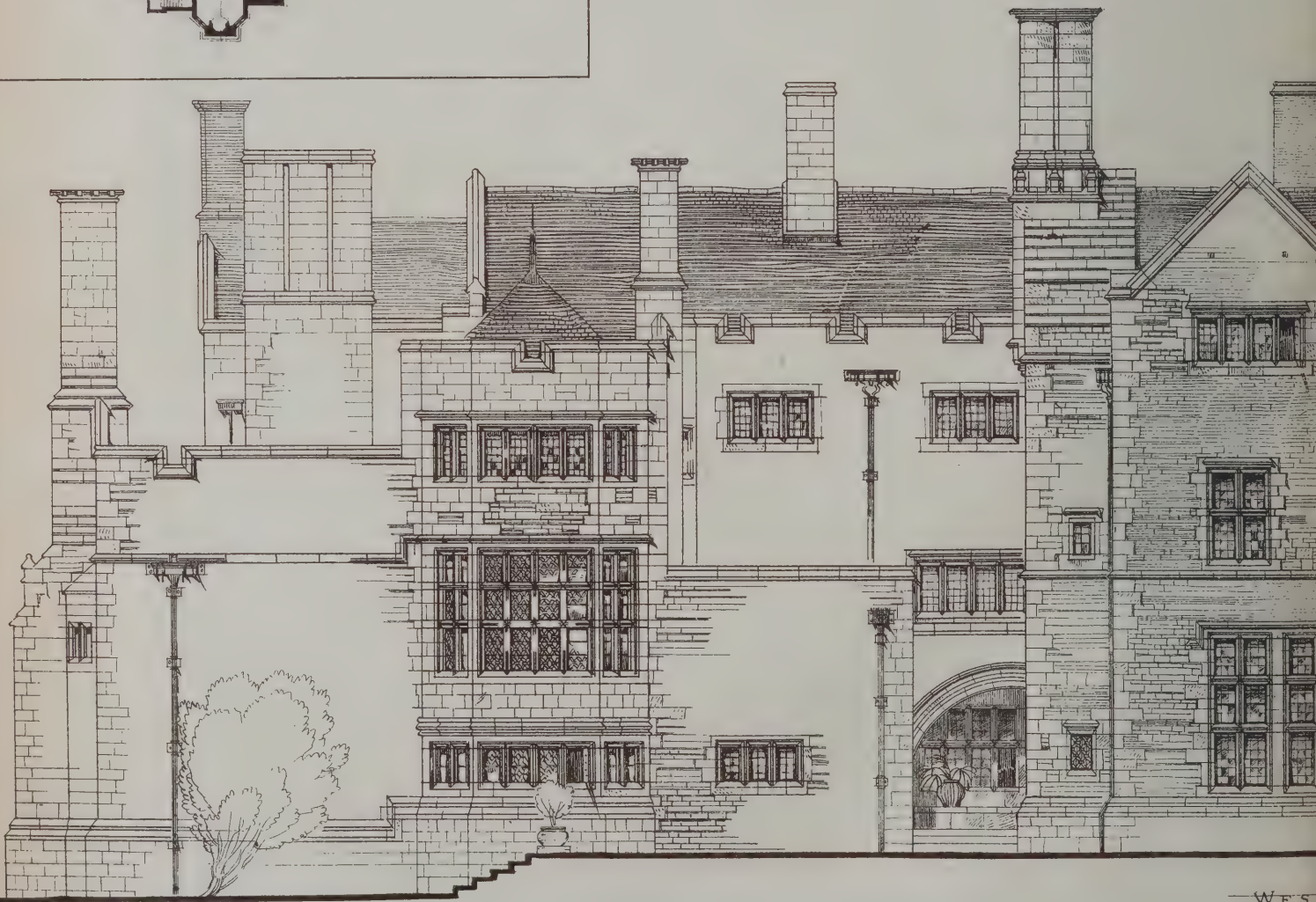
Danpool - Cheshire.  
Design for chimney piece in Picture Gallery.

Edmund Slant.  
Wex - Co. Bros. May 1882









WEST

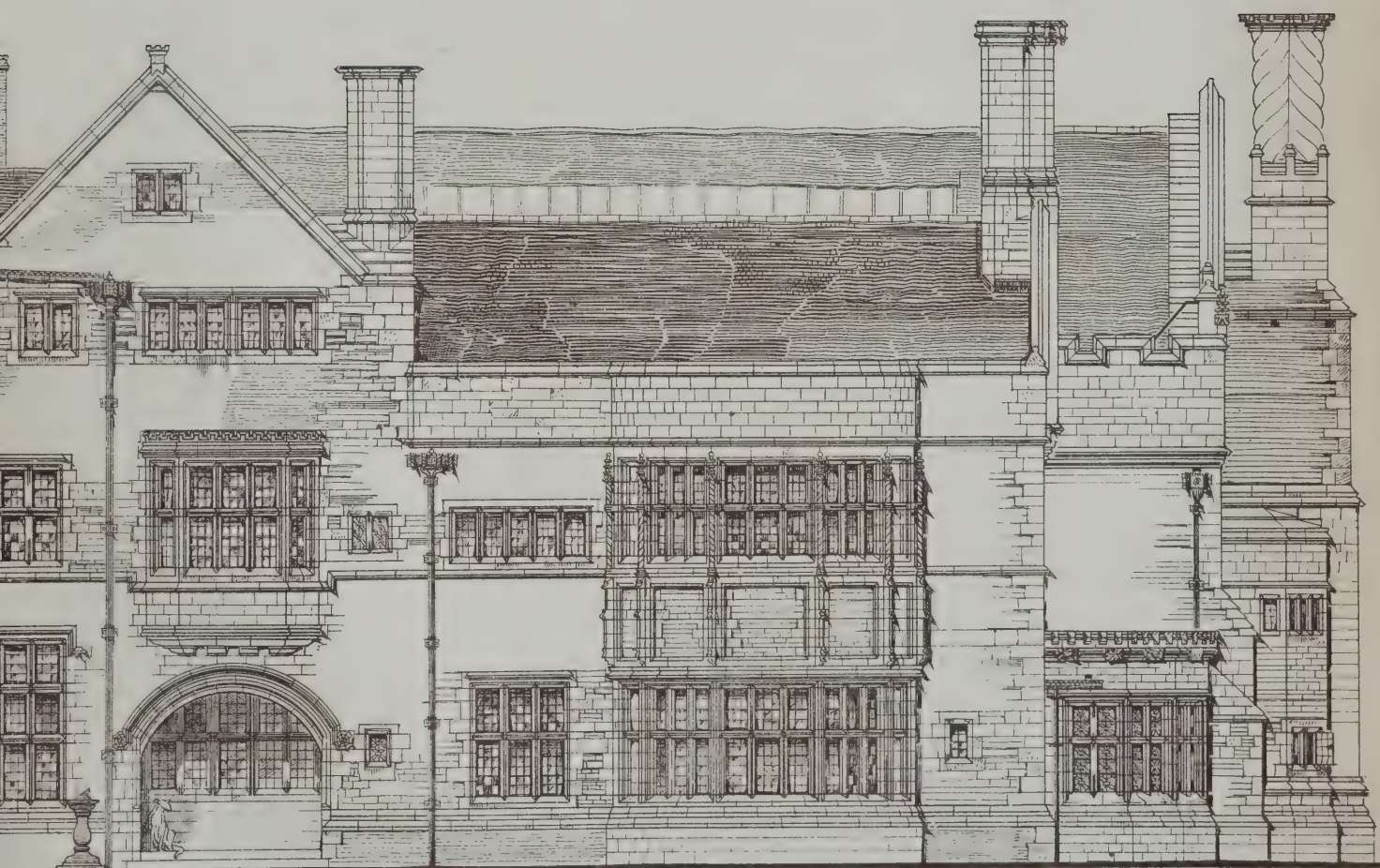
W.R. LETHABY, DEL.

DAWPOOL,

R. NORMAN,  
J. F. DOY



1854.



ELEVATION

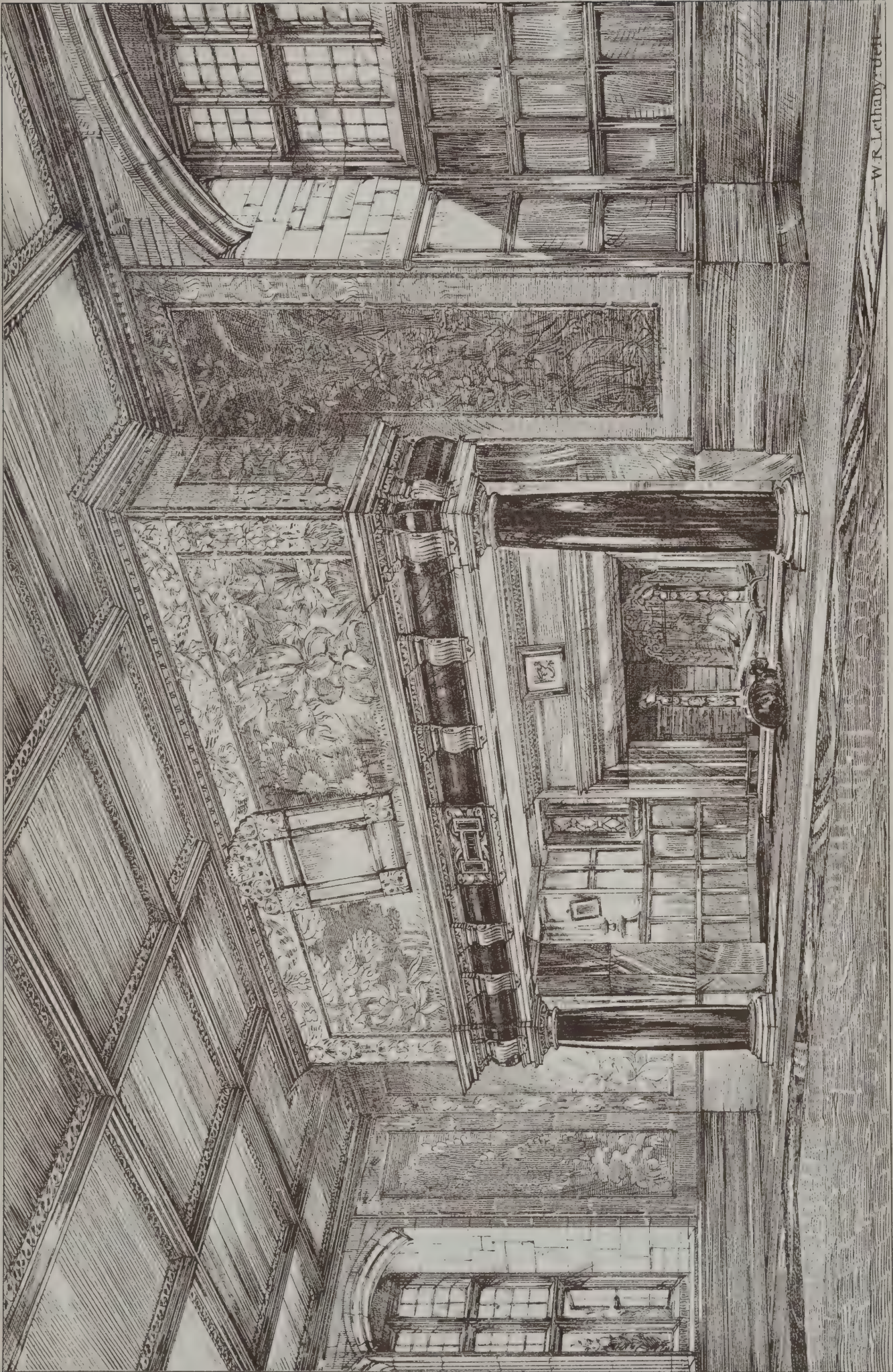
CHESHIRE.

AW, R.A. } ARCHITECTS.









W. R. Lethaby: del.

DAWPOOL, CHESHIRE.

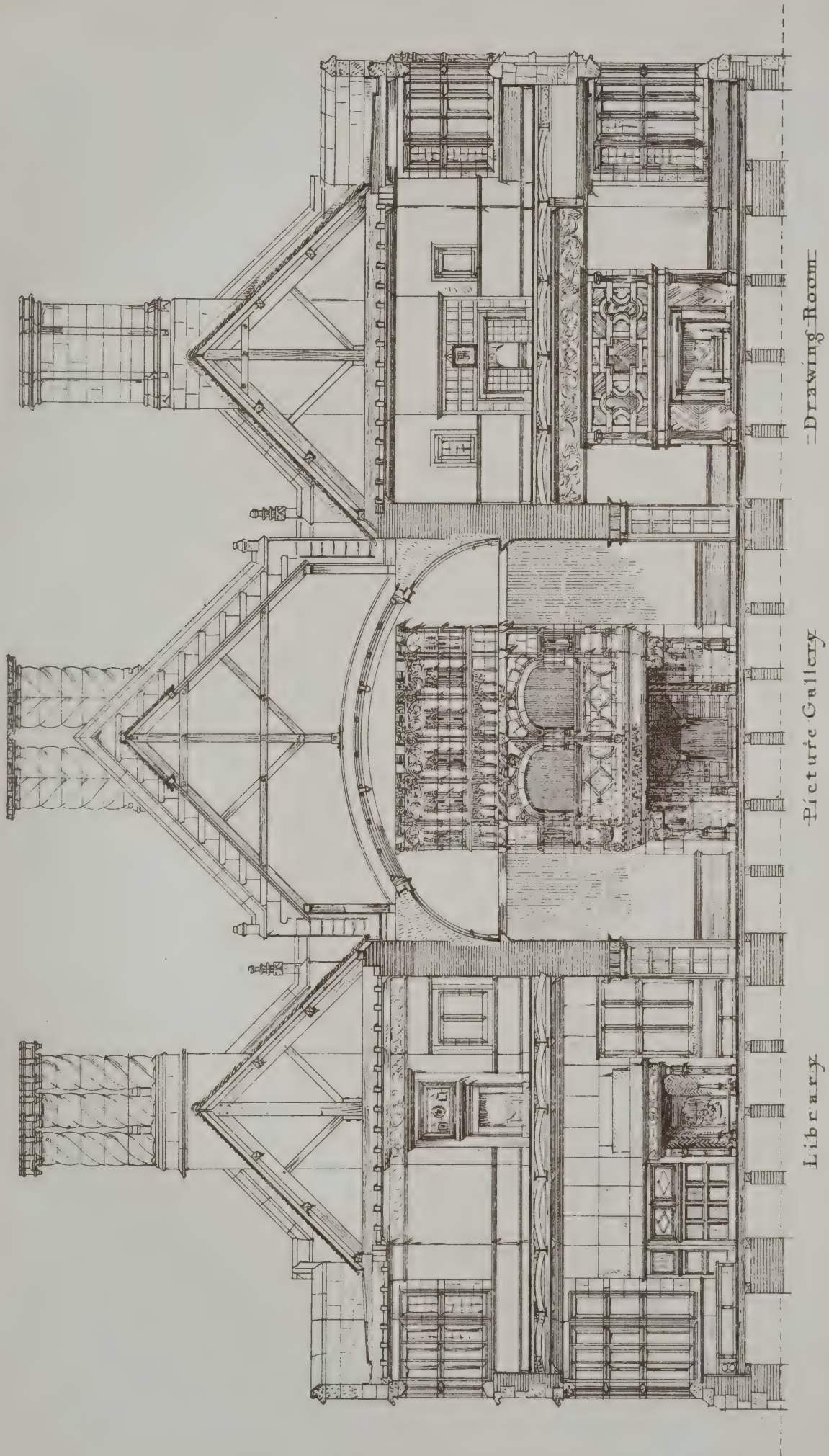
THE DINING ROOM.

R. NORMAN SHAW, R.A. } ARCHITECTS  
J. F. DOYLE, }









DAWPOOL, CHESHIRE.

R. NORMAN SHAW, R.A., ARCHITECTS.  
J. F. DOYLE,







## ILLUSTRATIONS.

DAWPOOL, CHESHIRE.

WE publish this week several illustrations of a house in Cheshire, which is in course of erection from the designs of Mr. NORMAN SHAW, R.A., with the aid of Mr. J. F. DOYLE, of Liverpool, as local architect. Nearly all of the originals have been exhibited this year at the Royal Academy. The work has been carried out by local contractors, and in a style which has given satisfaction to Mr. NORMAN SHAW.

## THE INDUSTRIAL ART EXHIBITION IN PARIS.

THE exhibition organised by the Union Centrale des Arts Décoratifs in order to obtain funds to establish a museum of industrial art is now fully arranged. The first of the present series of exhibitions was held in 1880, when artistic metal-work formed the special collection. In 1882 art in carved wood, textures, paper, leather, book-binding, and furniture was brought together; and in the present exhibition stone carving, wood used for artistic construction of buildings, with china, terra-cotta, and painted glass, are the special objects. This is the eighth exhibition held under the auspices of the Union Centrale des Arts Décoratifs, the last before 1880 having been held in 1876, when the series was interrupted by the great exhibition of 1878. Although it is to be feared that these biennial gatherings become too much like large bazaars for selling fancy articles, it may safely be said that the one now open is very fine of its kind. There is not enough, perhaps, of musical attraction to induce throngs of Parisians to crowd the Palais de l'Industrie in the Champs Elysées, as Londoners do the Healtheries; yet the exhibition is fairly popular, and is meeting with a proper share of public attention and support.

One of the chief attractions, says a correspondent of the *Scotsman*, is a large darkened chamber in the centre of the ground floor, where the stained glass of the immediately past years is shown to great advantage. One house, Champigneulle, of Paris, formerly of Metz, exhibits no less than twenty-one magnificent examples of painting on glass all of which have been executed this year. Several are copies—doubtless for new churches—of famous windows in ancient places of worship, such as St.-Eustache in Paris and the cathedrals of Bruges and Bourges; but most are new works for private houses or theatres. Some of these are treated quite out of the old conventional ill-drawn style, and are delightful applications of natural forms to this always charming method of decoration. One is for Mons. F. G. Dumas, the editor of the *Salon Notes*, and is in the Japanese style, something after the manner of La Farge, of New York, whose works are so much out of the ordinary run. Another attraction in the exhibition is the Salon d'Honneur du Président Grévy, erected in the place of honour for the use of the President at the opening of the collection. This forms a very similar feature to the Prince of Wales's pavilion at the Fisheries and the Healtheries in London, being superbly furnished by one of the leading houses in Paris. The specimens of carved wood are confined chiefly to the erection of small buildings, the best being that of a Swiss chalet, where the bricks and the wood form a very agreeable artistic combination. The stone carving is also confined (almost necessarily so by reason of size) to models; but of china and terra-cotta there are numerous stalls and collections. Judging impartially, it may be said that Messrs. Doulton, of Lambeth, have as fine a set of specimens as any, and there is an air of real utility about their exhibits to which the somewhat gimcrack French works never attain. In artistic erections there is a capital imitation of a waterfall, and many examples of the application of wood to decorations of all kinds. Attached to the exhibition, and forming a very important portion of it, is a collection of national manufactures. These are the products of the State establishments for the manufacture of china at Sèvres, tapestry at Beauvais, and tapestry and mosaics at Les Gobelins; and a comprehensive idea may be obtained from them of the many beautiful and artistic objects made specially for State purposes, and not for sale—such as for presentation to foreign Princes or to foreign Courts, as well as for the decoration of the many provincial museums and hôtels de ville throughout France.

It was in 1695 that the first French porcelain was manufactured at St.-Cloud; but in 1713 and 1735 other establishments were created at Lille, Chantilly, and other places. In 1753 Louis XV. named the chief factory, then at Vincennes, a royal manufactory; and six years afterwards this was removed to Sèvres, where, under all the varying régimes, the production of works of art of the finest kind has continually proceeded. In 1879 a school of ceramic art was commenced, where twenty young men are taught all the processes of the manufacture, and they may either remain in the State establishment at Sèvres or go elsewhere fortified with the *imprimatur* of the finest school in France. The collection now on view gives examples of every kind of work done at Sèvres, from the immense imperial vases of royal blue to the

little five o'clock tea-sets with only the tiniest ornaments on the little dishes. The manufactory of Gobelins tapestry dates from the beginning of the seventeenth century, and sixty years later the far-seeing Colbert obtained for it the title of Manufacture Royale des Meubles de la Couronne, adding goldsmiths' work and wood carving to tapestry weaving. In 1664 the manufactory of Beauvais was established from workers who previously wrought at the Gobelins. At both these places there are a small number of pupils allowed to be taught the mysteries of the art, so that the work may not degenerate, but rather improve. The Gobelins tapestry is so well known that no description of it is necessary. The finest in the present collection is a reproduction of the famous Louvre picture by Ingres of the *Crowning of Homer*, where, by a cunning mixture of tints, the tone of the painting is admirably imitated. Besides this there are many tapestries of small subjects, all wrought with the greatest care. When the French set their minds on promoting any particular branch of the fine arts, there is no doubt that they go in for it heartily. It is, therefore, likely that the new museum will very soon be one of the attractions of Paris; and it behoves our industrial art-workers to look well to their interests, so that the French do not again too far outstrip them in the pursuit of the art of making our homes and surroundings as beautiful as may be desired.

## EARLY CELTIC MONUMENTAL INSCRIPTIONS.

THE course of Rhind lectures on "The Ogham-inscribed Monuments of Ireland" has been continued by Sir Samuel Ferguson, Q.C., President of the Royal Irish Academy. The second lecture began by describing the district in Ireland in which these Ogham-inscribed monuments first attracted learned attention. The barony of Corkaguiny, in the county of Kerry, is continuous with the long peninsula which, reaching out more than thirty miles westward into the Atlantic, separates the Bay of Tralee on the north from the Bay of Dingle on the south. After passing a ravine which separates the mountain of Slieve Mish from the lower eminences of the Slieve Mish group, the traveller enters the parish of Ballinvoher, a rough, lonely country, but abounding towards the sea in remains of circular huts and other dry-stone constructions, indicating a former ill-civilised but numerous population. Here, some distance up the mountain declivity to the right, in the townland of Rathmalode, there formerly existed a rath, or earthen fort, and in it a cave, the lintel over the entrance to which, having on it a cross and an Ogham inscription, was transferred to the adjoining townland of Lougher, where it served the same purpose over the door of a farmer's dwelling until removed to the Royal Irish Academy in Dublin, where it now is. After citing Colonel Lane Fox's account of the construction of those rath caves, the lecturer gave an account of a monument higher up in the recesses of the mountain, westward of Lougher, and at a farmstead in the townland of Ballynahunt. This monument stands attached to the gable of one of the farm buildings, whither it had been brought from a holy well higher up the mountain, to the east. It is a cross of the Latin form, incised on the broader end of the stone. An Ogham inscription has occupied both arrises and the top of the narrower end. Were the stone set up so as to exhibit the cross, the Ogham would be concealed in the earth. This, however, is what they might be led to expect if they looked to our oldest written evidences for information regarding the form of such monuments, and the arrangement of Ogham legends on them. It might be that the Ballynahunt inscription exemplifies the supposed practice of hiding the sepulchral epigraph underground; but other examples are not wanting of Ogham-inscribed flag-stones laid flat on the surface, and this may very probably have been one of that class. Old as it may be, however, the Ballynahunt stone is a Christian monument, not only evidently by its cross—for he put aside the idea of Christian crosses having been superadded to Pagan sepulchral monuments as resting on no evidence or reasonable presumption—but not improbably by the terms of the inscription itself. The reading appears to be—*Degenngel magi reddos*. One digit only of what he supposed to be *l* remained at the top; and, unless the character be *l*, the explanation of this strange sequence of syllables which presented itself to his mind at the time when he first examined the monument, must be discarded. He thought, then, the name might possibly be *Dugreddos*; divided by the interjected words *Ennggel magi*, "apostle of the son," and not *Dugenngge* or *Dugennggub*, "son of Reddos," as it has by others been taken to be. An example of this kind of word-intercalation, on the possibility of which he had here speculated, is found in the verses improvised by Columbkille on the death of Longarad of Kilgarad:—

Is marb lon  
do cill garad, mor in don—  
Athbath lon  
i Cill garad, mor in don.

Dead is Lon (of Cill) garad—great the evil!  
Died hath Lon (in Cill) garad—great the evil!

where "do cill" and "i cill" are interposed between the constituent parts of Longarad's name. If other monuments should



appear to suggest something of the same kind of dispartition of proper names, it would be well to bear the Ballynahunt legend in recollection. Sir Samuel proceeded to describe similar monuments in this district. He next spoke of a remarkable cave at Aghacarrible, in the parish of Kinard. It is regarded as a rath rather than a killeen or burial-place, and it had a cave similar to the rath caves. This cave is only a few feet below the surface, is 5 feet wide, and 4½ feet high. Its walls bear Ogham legends. After describing the interior, Sir Samuel said the inference which commends itself most to the mind in contemplating such an interior is that the materials already inscribed with their monumental epitaphs have been brought from some neighbouring cemetery; and this gives rise to a consideration of no little interest and curiosity. The cemeteries which are found adjoining such caves, and from which the materials of the caves have presumably been brought, are generally of that class of burial-places called *killeens* or *cealluraghs*. These are very numerous in the south and west of Ireland. They are not used for the interment of Christian adults. In most of them the burials are confined to unbaptised infants. How could they account for the semi-sacred yet unholy character of these cemeteries? The writers who assert a Pagan origin for Ogham writing regard them as the burying-places of the old Pagan population, and on this ground account for the want of reverence for their grave-stones shown by those who plundered so many of them to obtain materials for the construction of their rath-caves. In support of this view it is alleged that the Ogham inscriptions found in rath-caves never bear the Christian emblem. And this is generally true. They had seen, however, that the cross on the Gurtneagullagh stone did not protect it from being used as a lintel over the doorway of the cloghan there; and, in fact, in this cave of Aghacarrible one of the wall stones, although not Ogham-inscribed, bears two incised crosses, and has presumably, as well as the others, been brought from some killeen or disused cemetery in the neighbourhood. The theory assumes a total disuse of the Pagan cemeteries by the early Christians, save for the interment of the unbaptised, which is not consistent with the course of the social transition from Gentileism to the Faith elsewhere. Pagans and Christians repose in the adjoining *loculi* of the Catacombs. The repugnance indicated may have sprung from another source, to which a wider survey of the evidence might yet lead them. The lecturer proceeded to describe the monuments and killeens in some degree of detail, and brought forward a good deal of evidence to show that they were of Christian rather than of Pagan origin. After speaking of one, a rare, instance in which a killeen, or kiln, or burying-place, with an Ogham-inscribed cross over it, was found in connection with existing ruins of a church, and with an evidently Christian monument erected in it, he said the question would be asked, Why was the cemetery now regarded as unfit for adult Christian burial? Why and when did it come to be so regarded? Whether an answer could be given to these questions must depend on a fuller survey of the remaining evidences; but they would perceive that these killeens had a wider interest than they might at first have appeared to possess. He spoke of a second killeen or *cealluragh* in this district, also disparaged by the faithful, and reserved for the unbaptised. It is at Kilfountain. Continuing westward through the townland of Maumanorig, in Marhin parish, midway between Temple Manahan and the Dunurlin Road, will be found a third *cealluragh*, and in it the foundation of a ruined church and a stone monument bearing an Ogham legend of a more complex, and, so far, a novel character. That it is a Christian monument is attested by two Maltese crosses, one of them supported on a stem, as on the Aglish example. The inscription is carried round the face of the stone, which is a boulder apparently *in situ*, on an artificially cut stem-line, and at first sight appears to present the following singular succession of syllables—*Anmcolololn alilltair*. Sir Samuel related how he came to read this inscription, "Columb the Pilgrim," concluding that this was the person in whose epitaph these pains had been taken to disguise his name and manifest his Christian labours. In conclusion, he said that up to this point they had regarded *magi*, "son of," as a genitive. The suffixed *i* has been considered inflectional and equivalent to the infixed *i* of *maic*, the more modern genitive of *mac*. Here it appears indisputably to be in agreement with the nominative *Erc*, and excites renewed doubts as to these Oghamic forms being governed by ordinary grammatical laws. The *ias* genitive for nouns ending in *c* and *n* is again exemplified in an inscription at Dunmore Head, which, rugged and weatherworn as it is, must be considered one of the most valuable for philological use or warning, as the case may be, hitherto brought under notice.

In his third lecture on Monday last, Sir Samuel Ferguson continuing his description of the Ogham inscriptions found in Kerry, said that turning back from Dunmore Head, they came to the harbour of Smerwick, on whose shores, in the townland of Ballinrannig, formerly stood seven Ogham-inscribed monumental pillars, four of which were now at Burnham. One bore the name Broinionas, which, like the term Corb, indicated a practice of applying names of humiliation in Ogham epitaphs. Leaving the cairn of Cill-Vickallane, or the "graveyard of the sons," as it was called, the lecturer passed on to Kilmalkedar, where there was a comparatively large church of that Hiberno-Romanesque style

which Petrie had endeavoured to show was earlier developed in Irish than in British examples. Among the gravestones in this Christian cemetery was one Ogham-inscribed pillar, which seemed to read "angel" before the principal name. Dealing with Mount Brandon, the lecturer referred to the "crumthir" pillar, which stands at a height of 2,000 feet in the townland of Arraglen. Two crosses on the pillar sufficiently attested its Christian character, but on the western front ran the Ogham legend "Qrimitirros." Proceeding along the seaward face of the mountain, and descending towards the coast village of Cloghane, in the townland of Clonsharagh, they came upon three great "gallauns" or standing stones. Their aspect was not such as our present information would lead us to expect in Christian monuments, and Ogham digits existed on the side and top arris of the great block in the centre of the standing group. Leaving Brandon mountain, he proceeded eastward to Castlegregory, in Killaney parish, where, built into the chimney-piece of a farmer's cottage, formerly existed an inscribed stone now in the collection of the Royal Irish Academy. One other Ogham inscription in Corkaguiny was found at the ruined barbaric fortress of Cahir Conree, which was the fort of Curoi, son of Dari, a name famous in Irish romance, the rival of Cuchullin, by whom he was slain in his mountain stronghold, through the treachery of the faithless Blanaid, who milked the fatal white cows with the red ears into the stream as the signal for attack. Northward of the Shannon, in Clare, there was only one Ogham inscription, but it was a monument in many ways worthy of note. The much-discussed Mount Callan inscription was on a flagstone bearing an Ogham legend which at once struck the eye as belonging to a school of inscriptional work, strongly recalling the style and appearance of what might be called the scholastic Oghams of the books. The characteristics of these examples were a pen-drawn stem line and vertical stem-crossing vowels as distinguished from oblique stem-crossing consonants. On the Callan Monument not only were the words divided by the points over and under an incised stem line, but the whole legend was set in an incised frame or cartouche, giving at first sight, to those acquainted only with ordinary Ogham, an unexampled and questionable aspect. Irish antiquaries, however familiar with the word separations of Scottish Ogham legends, no longer looked on these points with suspicion, and the surmises of fraud and forgery which at one time discredited that monument might now be regarded as altogether displaced. No one could look on the faint, weather-worn digits without a strong persuasion that the inscription was many centuries old, and, of whatever age, a genuine piece of work. But its tenor was quite different from that of any other Oghamic sepulchral legend. The word-divisions indicated the necessary course of reading.

Fan : lia : do lica : con(II)as : colgae : cos : obad—

"Beneath this stone," although a formula foreign to Oghamic sepulchral language, need not necessarily be more modern than the *sub hoc congeries lapidum* of the Carausius monument in Wales, adjudged by competent scholars to some time before the eighth century. As yet no success had attended the effort to extract anything more intelligible than that rendering which *prima facie* presented itself, however suspicious its appearance, "under this stone lies Conas (or Collas) (the) sword-accomplished, the (fleet) footed." Re-crossing the Shannon into Roscommon, the traveller was taken to Rathcroghan, the old residence of the Con-naught provincial kings. The pillar-stone of Dathi was still standing, but the name to which he would call attention was that of a personage even more renowned than Dathi in connection with Rathcroghan, the Amazonian Maev, whose wars with her former husband, Conor, King of Ulster, formed the subject of the great Irish romance of the "Tain bo Cuailnge." Her name lived in the topography of the country, although contemporary with that of Augustus; and an identical name had been preserved in Ogham in a cave, which also bore her name, close by the great mound of Rathcroghan, which she inhabited. About 300 yards from the Relig-na-ree was a smaller disused and churchless cemetery, also circular, within the area of which were the entrances to what was traditionally known as "Queen Meave's treasure-house." Sir Samuel Ferguson next touched upon the Ogham monuments in Tyrone, and the few that existed in Derry and Donegal, referring, in conclusion, to those in Meath, where the Slieve-na-Calliagh hills, for a distance of two miles, constituted a vast cemetery of scattered sepulchral cairns, supposed to be the remains of Irish pagan interments. From the ornamentation of these cairns and the etchings on the bones, he concluded that a higher art co-existed with the use of traditionary barbarisms in sepulchral monuments.

**A Tunnel**, measuring about 5,000 feet long, and constructed at least nine centuries before the Christian era, has just been discovered by the Governor of the island of Samos. Herodotus mentions this tunnel, which served for providing the old seaport with drinking-water. It is completely preserved, and contains water-tubes of about 25 centimètres in diameter, each one provided with a lateral aperture for cleansing purposes. The tunnel is not quite straight,



## A GERMAN COMMERCIAL MUSEUM.

FOR some time past the Frankfort Chamber of Commerce have been considering the advisability for the erection of a Commercial Museum on the pattern of the Musée Commercial in Brussels, which should render it possible for the traders and manufacturers of Southern Germany to inspect the products of foreign competition, and thus become clear as to the means to be taken to meet it successfully. As the first step it would be necessary to have the co-operation of the foreign Imperial German Consulates, as they would have to send in samples of the leading products of the foreign industrial countries, together with information about the sale, price, mode of packing, &c. It would then be the duty of the museum to arrange these samples systematically, and to associate with it an office for the requisite information, and a commercial library.

Meanwhile, stimulated by the Royal Ministry of Commerce, and by invitation of the elder society of Berlin merchants, and of the Secretary-General for the Central Union of German Industrial Classes, as well as of the German Commercial Diet (Handelstag), a conference on this subject took place in Berlin on November 24, 1883. The invitation mentioned that it would be seen at once that the best consular report be insufficient to describe and to judge as to pattern, quality, manner of production of the article required, and that the raising of a commodity can only with certainty be formed when that commodity is before the producer *in natura*, with the requisite explanations; and to this end the erection of an Imperial Commercial Museum in Berlin, on the pattern of the Musée Commercial erected some years ago in Brussels, would well prove itself qualified to be the means of imparting great stimulants to industry, and also to point out many new paths for export trade. Such a museum would be called to fill the same place and to guide the export trade in a manner as the geological, anatomical, and such-like collections, guide the field of natural science. For this purpose, and by means of the consuls, not only all those fabrics would have to be included, which in different countries enjoy a notable sale, but the exhibition of these articles would, with the necessary explanation also, offer to German manufacturers the opportunity of considering the possibility of supplying the products in question, and putting thus the possibility into practice.

To this end interested communities would not only, through the catalogue, be accurately instructed in the peculiar tastes, wants, and addresses of the different buyers, but would also be informed about the freight, expenses, and the import duty thereon, and be thus enabled to judge at what price the articles must get produced. In this manner the German manufacturer would really be in a position to judge practically the circumstances which come under consideration in his competition in the markets of the world, and in the constant high development of home industry; the greatest hopes may without doubt be attached to this. On the other hand, it need not be specially stated here that the foreign raw produce suitable for improvement and further employment in German trade, as well as those natural treasures, materials, and products to be appropriated for commercial purposes, would also find a place in the museum.

Frankfort was represented at this conference by their Lord Mayor, Dr. Miquel; by their member of Parliament, Mr. Sonnemann; and by Mr. Sulzbach, a banker, who moved a resolution that while they welcomed with pleasure the idea of erecting such a museum in the chief city of the empire, yet they believed that in this matter centralisation would be a great mistake, and that a branch establishment for South Germany should be erected in Frankfort. In support of this resolution it was argued that for the manufacturers of Central and Southern Germany, the journey to Berlin was too far and too expensive. For this reason the intended institution must have at least one branch. Even in Belgium the suitability of a second place was felt, and besides the museum in Brussels, one in Ghent was lately erected, and which is not one-fourth the distance from Brussels that Berlin is from Frankfort. Not only is Frankfort the centre of an important foreign traffic, it is also the centre of a large number of factories of smaller but highly-prized articles. Sixteen millions of the inhabitants of Germany gravitate towards Frankfort, viz., those of Bavaria, of Wurtemberg, of Baden, of Alsace and Lorraine, and of Rhenish Prussia, who would rather go to Frankfort than to a far more distant northerly town like Berlin. As the consular reports and consignments of products and patterns would be the same for Berlin and Frankfort, the Government would be caused no extra expense by the erection of two museums, but would be about the same as necessitated by one.

The Frankfort merchants would be quite willing to raise the cost of a site for the erection of such a museum of commerce. They therefore asked that, should this question be favourably considered by the Imperial Government, they would then not only provide for such a trade museum in Berlin, but also for one in Frankfort, and that they would instruct the German consuls to send the leading and newest products that compete with Germany in duplicate, namely, one collection for Berlin, and one for Frankfort.

After this the following resolutions were passed:—"The meet-

ing held here to-day for confidential conference on the subject of the erection of an Imperial Museum of Commerce in Berlin, declares that the formation of an Imperial Museum of Commerce in Berlin, and of one or more branch establishments arranged for the same purposes—namely, that home trade and industry may gain information about the productions, and especially the foreign competition requirements, as well as the circumstances relating to this subject—is an affair of the greatest economical consequence and of the most urgent importance. The meeting therefore resolves the appointment of a committee, with power to add to their number, which committee would be authorised, in connection with the Central Association of German Manufacturers, the German Mercantile Assembly, and with the co-operation of the body of Berlin merchants, to stimulate the interested circles of Germany as well as the German Imperial Government to take the necessary steps towards its realisation."

## THE METROPOLITAN BOARD AND THEATRES.

THE following report on theatres and music-halls, in reference to a letter received from the Lord Chamberlain, was presented from the Building Act Committee, at a meeting of the Metropolitan Board of Works, on the 17th inst. :—

"(1) Your sub-committee have to report that they have had before them a letter from Sir S. Ponsonby-Fane, of the Lord Chamberlain's Office, dated July 9, 1884, asking what course the Board would suggest with regard to the future issue of the Lord Chamberlain's licenses to theatres. Allusion is made in this letter to the fact that the Board have now nearly completed the work of putting the theatres into a structurally safe condition, and it is stated that the Lord Chamberlain, being most anxious to act in concert with the Board for the safety of the public, would gladly continue to refer to them in all cases before the issue of his licenses if the Board would still be prepared to give him the benefit of their opinions as to the structural security of the buildings, and the efficiency of the fire appliances. In a further letter, dated July 25, 1884, Sir S. Ponsonby-Fane encloses a list of twenty-six theatres (exclusive of nine still undergoing alteration), in respect of which the Lord Chamberlain wishes the Board to inform him whether his annual license can be issued with due regard to the safety of the public. Your sub-committee quite agree that it is desirable that there should be a periodical inspection of theatres for the purpose of ascertaining whether anything has been done to neutralise or diminish the effect of the works executed under the Board's requisitions, but at the present time this is a responsibility which rests upon the Lord Chamberlain, and which could not be assumed by the Board without express statutory authority. His lordship appears to be aware of this fact, for in a subsequent letter to the two above-mentioned, and which was referred to your sub-committee on August 6 last, he expresses the opinion of himself and the Home Secretary that the Board should insert in some Bill to be introduced into Parliament next session a clause making it compulsory for places of amusement to have a certificate from the Board as to the security of the buildings for the public before applications are made for licenses. Your sub-committee are of opinion that the Board should adopt the course suggested by the Lord Chamberlain, provided that power were taken at the same time to charge a fee to owners of theatres to cover wholly, or in part, the expenses of such periodical inspection. They recommend that the Clerk be instructed to address a communication to the Lord Chamberlain to the effect that the Board, having completed their requisitions with respect to the structural alterations required at the various theatres existing in the metropolis at the time of the passing of the Act of 1878, do not propose to take any further action with respect to such theatres, unless in any case they shall receive an official intimation from his lordship, as the result of an inspection made by an officer of his department, that additional structural alterations have been subsequently made by the owner of the theatre; but that the Board would have no objection to cause an annual inspection to be made of each theatre, but are of opinion that the cost of this service should not be borne by the ratepayers of the metropolis, but that the Board should be empowered to charge the owners of theatres a fee for the service rendered."

Mr. Selway said the Board had done the work it undertook to do in respect of the structural defects of theatres, although it was not able to do all it wished; but the Board had no staff to attend to further improvements. The portion of the public who went to theatres was but a very small portion, and for the whole of the public to be taxed for the management structurally of theatres would be very unjust indeed. If the Board was to be called upon for the expense of structurally altering theatres it ought to be entitled to receive the fees, and not those who did not do the work. If the Lord Chamberlain wished to have the entire management of theatres and the regulation of the length of ballet-girls' skirts, by all means let him take his own course, but he contended that this Board ought not to be called upon to pay for it.



The report was adopted by a majority of 26 to 1.

The Building Act Committee presented the following report on Her Majesty's Theatre:—"Your committee have to report that they have from time to time had under consideration the question of the steps it is desirable to take with respect to Her Majesty's Theatre, Haymarket. The Board's sealed notice requiring certain structural alterations to be completed within a period of six months was served upon the owners on February 12, 1884, and two months after this date the superintending architect reported that the works had been begun, but that little progress had been made. On May 19 the owners informed the Board that the whole of the alterations relative to the audience part of the theatre were completed, but it was impracticable to complete the others while the theatre was open. On July 15 the superintending architect reported that the various important works required by the Board had not been carried out, and the owners were reminded, by direction of your sub-committee, of the approaching expiry of the notice on August 12. The superintending architect has since the recess again surveyed the theatre, and found that the works are not completed and that the theatre is closed. The committee recommend 'that the solicitor be instructed to intimate to the owners that unless such alterations are completed before the opening of the theatre the Board will take legal proceedings to enforce compliance with their requisitions.'" The report was received and adopted.

The Building Act Committee reported that they had considered the application of Messrs. Francis on behalf of the council of the Albert Palace Association for a certificate by the Board, under the Metropolis Management and Building Acts Amendment Act, 1878, with respect to the construction of a concert-room, to be called Connaught Hall, at the west end of the Albert Exhibition Palace buildings, in Prince of Wales's Road, Battersea. This concert-room is 205 feet long and 118 feet wide, and forms part of the Albert Exhibition Palace. It consists of a nave, which has a span of 50 feet 6 inches, and is 58 feet high, and two aisles, which are each 33 feet 9 inches wide and 30 feet high, with galleries over them. The total number of persons for whom sitting accommodation is furnished is 3,900, of which number 1,500 will occupy the galleries. The building is of an unusual construction, and does not conform to the Board's regulations for places of public entertainment in some important particulars. It is not enclosed by walls constructed in accordance with the Building Act, but chiefly by structures of glass and iron. It is not separated from the premises of which it forms part by proper party walls or party structures. The staircases are made of wood, and so are the floors of the corridor. From the details given in the report of the superintending architect, it also appears that the staircases are generally of insufficient width and some are inconveniently planned. The ironwork of the concert-room is not protected against the action of fire, and the position of the hydrants is not shown in the drawings. A separate means of exit from the gallery landing directly into the street is not provided. Having regard to the numerous points in which the building does not comply with the Board's regulations, the committee recommended that the certificate be not granted. The report was adopted.

### THE CHAMBERS' MEMORIAL.

SOME further particulars have been given of the plan prepared by Mr. W. Hay, architect, for providing in St. Giles's Cathedral a memorial to Dr. W. Chambers. It is proposed to open up the old vestry by cutting out an archway in the thick wall which separates it from the church. Originally this vestry appears to have been the sacristan's house of the old collegiate church. From the old engravings of the north side of the building it would seem to have been an offshoot for such a purpose, as it showed domestic-looking square windows in several storeys. Mr. Burn in his formal restoration in 1829 gave it externally some importance by inserting a tall Decorated window of three lights on each side of its two outer sides; but internally it is only a room of about 11 feet square by nearly 30 feet high. The proposal now submitted is to make it something like the St. Eloie Chapel, on the opposite side of the transept, stripping off the lath and plaster from the walls, and for the flat plaster ceiling substituting a handsome groined vaulted roof of stone, the walls being lined with the same material, and the floor paved with inlaid marble. The arch would be boldly moulded, and the chapel thus formed enclosed with a wrought-iron railing, like the other chapels. The architect's design shows a marble cenotaph or pedestal with foliated panels bearing appropriate coats of arms, angelic figures supporting wreaths at the four corners, and a recumbent figure of the munificent restorer of the cathedral, sculptured in Carrara marble, on top. To this feature of the design the Lord Provost's committee has preferred the stained-glass window which was proposed as an alternative. It remains for the Town Council to say whether they will adopt this recommendation, or decide in favour of the marble, leaving for some private donor what private donors have in the case of the cathedral shown a laudable readiness to undertake—the providing of the painted window.

### THE AMERICAN CHURCH IN PARIS.

A SERIOUS impediment, says a correspondent of the *Guardian*, has arisen to the completion of the handsome church which the American Episcopalians are building in the Avenue de l'Alma. It has now been in the course of erection for about two years and was expected to be ready for provisional use by Christmas, and to be finally inaugurated by Easter next, at the latest. Now, however, an unexpected obstacle has occurred which will greatly delay these intentions. It appears that a Jura marble of a too fragile description has been used for the clustered shafts which support the pier arches of the nave. The consequence has been that these columns have proved unequal to the support of the superincumbent weight of the edifice, and have begun to crack and splinter under the pressure imposed on them. The whole building has been obliged to be shored up with wooden arches and ponderous beams placed under the pier-arches, while ten at least of the clustered columns of the nave will have to be removed and replaced by a more solid material. The expense and labour attendant upon such an operation will be very great, and the time required will probably delay the completion of the church at least six months beyond the date anticipated. The difficulty will, no doubt, be met and overcome. But its occurrence, and the prolongation of the work, will prove a serious strain upon the energies of the highly esteemed rector, Dr. Morgan, who has been already so long and anxiously occupied in the completion of the enterprise, and now sees his expectations disappointed just as they seemed on the point of fulfilment. One can only heartily wish him safely through these new difficulties. Some time ago, when looking over the church, it was pointed out to the correspondent as a more correct style of Gothic construction that the segments of the columns were much longer, and, therefore, more perpendicular, than was the case in similar French architecture. And, certainly, French builders generally form their columns of very short segments, and in the case of Classical buildings, like the Madeleine, of circular blocks hardly thicker than a millstone. The effect of so many joinings is not agreeable to the eye; but the solidity attained, both as to resisting pressure, or even a slight shock, is much greater. The too great length of the segments of the columns in the above case seem to have been one cause, perhaps, why the marble had not been able to bear the strain which was put upon it.

### OXFORD IMPROVEMENTS.

THE Oxford papers give a long list of the architectural improvements and new buildings which have been in progress during the past year. First comes the Indian Institute, at the corner of Broad and Holywell Streets, of which Mr. Basil Champneys is the architect. It is in the Jacobean style, with ornaments illustrating the fauna and flora of India. The weathercock on the turret, for instance, is in the shape of an elephant. Only a portion is yet ready, consisting of kitchen, store-rooms, porter's lodge, four lecture-rooms, parts of the library and museum, with offices for the curator and sub-curators, and the porter's living-rooms. The cost of this portion is 12,000*l.*, and some 6,000*l.* or 8,000*l.* will be required for the remainder.

The Physiological Laboratory at the Museum, facing the park, is in the Renaissance style, with many large windows. The architects are Messrs. Deane & Son, of Dublin, and the cost (10,000*l.*) will be defrayed by the vote in Convocation, which caused so much excitement early in the year. The restoration of the Bodleian Library has been completed for some time.

Among the colleges, Trinity have begun a new quadrangle on the site of the President's kitchen garden, of which the east side is finished. The north end of this building contains a reading-room lighted by an oriel window, the buttress supporting which is the only break in the straight east front. There are besides two oriel windows at the south end. There are twenty-seven sets of rooms, large lecture and reading-rooms, &c. The architect is Mr. T. G. Jackson, of London, and the cost of the work is 11,000*l.*

The new buildings of Corpus are at the angle of Merton and Grove Streets, next to Beam Hall, and will form the south side of a new quadrangle. There are three sets of rooms on each of the three floors, besides coal-cellar, scullery, and servants' room in the basement. The north side is broken up by a projecting bay, which forms the staircase inside. Until the future extension is finished, the entrance will be through the cottages. The architect is Mr. Jackson, and the cost between 3,000*l.* and 4,000*l.*

Several alterations in Oriel Chapel have been made by Mr. Jackson:—"The screen has been removed 11 feet further to the west, thus throwing this amount of additional space into the body of the chapel. This has been utilised by the erection of two new seats, seating five each, and four new fronts as well as five panel stalls upon each side. On the north side the oak stairs have been pierced, thus looking through into the ladies' pew, which has been fitted up by the old work taken from behind the screen. The organ gallery formed over the screen is approached by an open staircase in the north-west part of the ante-chapel. The gallery front, the end and the two sides, are filled with open-carved panels of



elaborate design. The chapel has been heated with hot water. The whole of the seats have been pulled up and fixed on new floors, and the marble floor taken up and relaid. The stonework of the window at the east end has been taken out and new work substituted in its place, the design matching that of the side windows. This is to be filled in with stained glass."

The principal's lodgings at Jesus are being extended in the direction of Ship Street by Messrs. Bodley & Garner. Besides this, a new oriel window has been inserted on the first floor facing the quadrangle, and the dining-room beneath has been rearranged. The oak panelling in this room has been cleared of paint, so that the original woodwork is once more seen.

At Christ Church a new organ has been erected in the cathedral by Messrs. Wills & Son, under the direction of Mr. Lloyd. The original organ was destroyed by the Puritans in 1644. In 1680 Father Smith built a new one, which was repaired in 1826 by Bishop, and enlarged by Gray and Davidson in 1848. Under the direction of Dr. Gosse it was removed in 1873 by the latter firm from the south transept to the screen at the west end, further additions to it being made at the same time. In the new instrument only a few pipes of the pedal organ, with some of the basses of the stopped diapasons have been retained, the *Oxford Chronicle* remarking that "some may regret the loss of the little that remained of Schmidt's work; but it is well to remember that the tone of modern organ-work seldom blends well with the old."

At St. Mary's Church back rails have been fitted to the gallery seats, "at the wish of a well-known Oxford divine, who generously paid all expenses." Betteris's billiard-rooms and the City Arms, an ancient alehouse opposite the west door of St. Mary's, formerly used as an evening resort by college servants and the Vice-Chancellor's attendants, has been remodelled, and, under the name of St. Mary's Entry, forms a residence for Professor Wordsworth.

Many alterations are in progress on various parts of the river. A new weir has been made alongside the old one at Sandford and two new iron bridges thrown across the front and back streams of the lasher. New weirs have also been constructed at Abingdon and Sutton Courtney. The old lock at Folly Bridge has been done away with, and the river dredged as far as Osney Lock, where a new weir and basin have been made. Osney Lock itself is being reconstructed on improved principles.

## UNIVERSITY COLLEGE OF NORTH WALES.

THE University College for North Wales was opened on Saturday last. The classes are held in a large building which at one time was well known as the Penrhyn Arms Hotel. It has been remodelled for college purposes under the direction of Mr. Richard Davies, architect, Bangor. In planning the laboratories and fittings advantage was taken of the experience of Professors Dobbie and Gray, who readily gave their valuable assistance. The large coffee-room, on the ground floor of the western wing, measuring 46 feet by 20 feet, will be used as a common hall for students, and as a dining-hall for professors and students. In the eastern wing, which was occupied by Her Majesty during her visit to Bangor, the wall which divided the wing internally into two apartments on every floor has been removed, and the necessary constructive alterations made to form one lecture room on each of the three floors. These rooms, which measure 40 feet by 20 feet, are assigned to the departments of English, mathematics, and classics respectively. Two other lecture rooms, each 29 feet by 24 feet, have been obtained by the removal of the partition walls which divided the western part of the main block into four apartments and corridor on the first and second floors; these are for philosophy and modern languages. The two rooms on the ground floor in the central part of the building hitherto used as bar and parlour, respectively, have been provided with a glazed vestibule, through which there is a direct communication to and between the rooms, and is fitted up as library. A servants' passage and service room, with hatch, has been formed to afford convenient access between the kitchen and dining-hall. A small room, situated between library and passage to dining-hall, has been fitted up as a lavatory for students. The western staircase, which extended from the ground to the first floor, has been continued up to the second floor. Communication is thus obtained from the rooms on the first floor of the western wing to those of the second floor, which hitherto was obtained through a corridor, now cut off by the formation of lecture-rooms. These rooms are being now arranged as two suites of private apartments for the principal and registrar. The communication between the eastern wing and the central part of the building on second floor has been stopped, and the space before used as passage has been fitted up as a cloak-room, and together with the adjoining lavatories assigned to the use of lady students. The increased superficial dimensions of the principal rooms, without a proportional increase in height demanded, when the new uses to which they were to be put were considered, that particular attention should be given to ventilation. Some of the lecture-rooms have Boyle's patent ventilators for admitting

fresh air, and Boyle's extractors on the top of chimneys. The alterations have been done by Messrs. Robert & John Williams, builders, Upper Bangor; the desks supplied by the North of England School Furnishing Company. The extensive stable, coach-houses, and yard have been formed into laboratories and lecture theatres, with suites of rooms attached. These buildings, which measure 120 feet by 80 feet, include two lecture theatres, each 34 feet by 34 feet by 19 feet high, divided from each other by a corridor 5 feet wide, and, by means of movable partitions, will give a spacious hall 76 feet by 34 feet for distribution of prizes, and the public demonstration. Students' laboratories, combustion room and balance room occupy the western side, and in the central portion, on main floor, are professors' laboratories and private rooms, preparation and apparatus rooms, &c., for the respective departments. Over the central portion just described is another floor containing magnetic room, in the construction of which no iron is used, optical and photometric room, photographic room, spectroscopic and gas analysis rooms. Flats, which are approached by staircases from this floor, are provided on the roofs for open-air experiments. With a few unimportant alterations, the basement has been utilised for workshops, stores, &c. The style of architecture which characterises the old buildings has also been preserved in the new; a bolder treatment has, however, been adopted. Mr. John Hughes acted as clerk of works.

## THE PLUMBERS' CONGRESS.

THE Congress of Plumbers at South Kensington, which has been organised by Mr. George Shaw, the Master, Mr. Towse, and other officials of the Plumbers' Company, has been most successful. The meetings on Monday and Tuesday were attended by a larger number than had been anticipated. Circulars had been sent to the mayors of the different towns in the three kingdoms, inviting them to nominate two representatives among the local plumbers, and, in consequence, members of the trade had journeyed to London from various parts of the three kingdoms. Mr. George Shaw presided on both days. A number of papers were read dealing with the technical instruction of plumbers, apprenticeship, the establishment of metropolitan and provincial boards of examiners of plumbing work, the registration of plumbers, and the formation of district associations. Dr. Ernest Hart referred to the complete absence of control in existing Acts of Parliament over the internal drain system of domestic houses. In the course of the discussion it was urged, in view of the importance to the public health, that plumbers should be responsible for their own doings, and a resolution was passed declaring it to be desirable that architects should not in future include plumbers' work in builders' contracts. Mr. F. C. Penrose, the architect of St. Paul's, concurred in the desirability of this separation. In regard to apprenticeship, it was considered desirable to foster its general resumption, and that to accommodate it to modern conditions, five years should be the maximum time, whilst two years of further engagements with any employer subsequent to completion of articles should be required before granting a certificate of full capability as a workman.

On Tuesday, resolutions were passed in favour of the registration of plumbers, the establishment of examiners of work done, and the formation of local Associations. Finally, it was unanimously agreed that the Plumbers' Company should be requested to adopt the best means of carrying out the various proposals, and of uniting the plumbers throughout the kingdom in a bond of trade relationship and in common action for the advantage of the public and the benefit of the trade.

## LIMOGES.

WHEN we first saw Limoges in 1857, says Mr. E. A. Freeman, in an article in the *Guardian*, its great church was still a fragment. It had something of the air of Köln. About one-half of a great French church rose high in the air, and at some distance to its west rose a tall and slender tower of a most singular air. But the tower did not, as at Köln, suggest imperfection as well as the unfinished body. There was no crane to show that there still was work to be done; and, though, as we come to learn more of the history of the building, we find out that the tower has been shorn of a spire, yet no one at first sight would say that a spire was at all needed. That is to say, in 1857 the church of Limoges was altogether unfinished. All that was left of the Romanesque church was the lower stage of the tower. Far to the east of it a magnificent church of the later French type had been begun; the choir and transepts were finished; the whole nave had been traced out and begun, but only about two bays were ever finished. In the sixteenth century the thought of carrying on the work seems to have been given up, as then the church was in a manner finished inside by adding a great organ-loft, handsome after its own fashion. The Romanesque church, in short, had given way to a Gothic church which remained a frag-



ment, and so a gap was left between the actual church and the tower. In 1857 there was talk of filling up the gap, and now in 1883 it is all but filled up; in short, the nave is now nearly finished. The work reminds one of Bristol, only to finish the lofty nave of Limoges was a greater work than to build the far lower nave of Bristol. Also at Bristol there was no ancient tower standing near where the west end had been or was to be, whose existence could not fail in some measure to influence the finish of the new work. At Bristol the architect could design his west front how he pleased, and we may be allowed to doubt of the wisdom of adding western towers to so small a church, especially as their addition implied the destruction of a still surviving piece of the monastic buildings. At Limoges there was the more frightful danger lest the ancient tower should be doomed to give way to the modern architect's notions of a west front. There was some such fear in 1857; but happily it seems to have passed away in 1883. It must be allowed that the tower stands awkwardly in the way of the new work, as it is not in the same line, and will have to join on in some way at a corner; but the new building seems to be adapted to it so far as it may be. The contrast will be great, and the tower will lose a good deal of its seeming height by having so lofty a building attached to it. But the two must agree as they can. No one could wish the tower to be touched, and no one can quarrel with the completion of the body of the church.

The tower is a strange building enough. On a vast square base which, if itself carried up as a tower would bring down Wymondham and even Ely to utter insignificance, stands a much narrower square stage, from which rises a slender octagon of three stages, set on in an unusual fashion—lozenge-fashion, if that word may be applied to an octagon, reminding one somewhat of the way in which the upper stage of the tower of Cartmel is set on the lower. This is the custom of Limoges; the towers of the other two surviving churches of the city have just the same character. Like some of the work at Angers, they keep the lines of the earliest Gothic; but their real date is late in the fourteenth century. The other two churches, those of St. Michael and St. Peter, keep their spires; the spire of St. Stephen's is gone.

These Limousin towers have a certain interest as examples of a very local form. We may doubt whether we really admire such singular height and slenderness and piling of stage on stage, very different from the artistic composition of such a tower as Bishop's Lydeard. But they are at any rate striking from their boldness and novelty. But the tower of the cathedral church has a far higher interest. To know what it really is we must go inside. The square base is masked by a casing, perhaps of the last days of the eleventh century; but within is the lower stage of the tower of the original Romanesque church, which, we can hardly doubt, stood as a detached campanile. The lowest storey, after a fashion rare but not unique, stood open. Four large columns, with their round arches, supported a kind of cupola. But the design was ruthlessly disfigured when the tower was cased. The columns were walled up and pointed arches were inserted; but it is not hard to call up the original effect, which may be seen in a less changed state at Le Puy, where however square piers take the place of columns. The odd thing is that the lowest stage of these towers presents the exact design of a Byzantine church of the smallest scale, lacking only the eastern apse. Yet there can be no reasonable doubt that both these buildings were meant to be what they are, the lower stages of towers; only that at Le Puy has been carried up with great skill in a later form of the same style, while at Limoges the far later tower sits with some measure of awkwardness on its ancient base.

When we first saw Limoges in 1857, there were still to be seen on the west face of this tower the traces of a church contemporary with the blocking of the columns and the introduction of the pointed arches. They have now given way to the necessities of the work of finishing the imperfect nave. They point to a church of considerable height, with aisles, very plain and simple, but using the pointed form in its constructive arches. Now, what is the date, first of the blocked columns, secondly of the work that blocks them? There was at Limoges an ancient basilica, attributed to Saint-Martial, the apostle of Limoges, in impossibly early times. Rome and Ravenna cannot show churches of the third century or earlier. But we need not doubt that a fellow to the churches of Rome and Ravenna lived on at Limoges till about 1012, when Bishop Hilduin began or at least ordered the building of a new and larger church. This is witnessed by the Aquitanian chronicler, Ademar of Chabannes. In 1095 Pope Urban consecrated this church or some other on the site. The present church was begun with funds left by Bishop Aimeric de la Serre, who died in 1272. Here are our dates. The tower in its oldest shape, if it stood along with the old basilica, must have been an addition to it. It would do very well for work of 1012; but Hilduin's church was barely begun, if begun, and its tower, if it had one, would be much later than that date. We are tempted to suspect that the four columns are older than 1012; that the blocking of those arches and the church of which we see traces against the recased tower belong to a rebuilding, begun perhaps in 1012, but carried on slowly, and perhaps not fully finished in its

western part even at the dedication in 1095. In this way the appearance of the pointed arch—here, as in Italy, a sign of the Saracen—really becomes no great puzzle. Under the present choir is a crypt, which ought to throw some light on the Romanesque building. But as it can be seen only by lifting up a stone which takes six men to stir it, it is pretty well forbidden ground to the ordinary traveller.

We now pass from this tower, precious relic of an earlier time, to the later church, the church which is now hastening to meet the ancient tower. Here we find ourselves carried into another world of art and history. Limoges cathedral, or so much of it as is built, is one of the loveliest examples of the best French Gothic style. We say French advisedly; by the year 1273 the elder local forms of art had pretty well passed away. One general model prevailed through the whole of what had now become the kingdom of France. And within that kingdom few buildings can, for internal effect at least, outdo such a church as the still fragmentary Saint Stephen's of Limoges. It does not come in point of scale in the first class of French churches; it does not rank with Bourges, Chartres, or Saint Ouen's; the dimensions on the ground plan even of the completed church would in England place it very low indeed, and even in France it does not cover anything like the same ground as the great buildings which we have just named. And, much smaller in extent, it is also, by all laws of proportion, by no means their rival in positive height. But its relative height is fully equal to theirs; it has all the loftiness which distinguishes a French church from an English one, and we fancy that it must be positively higher than any English church except Westminster and York. And though the arch of the vault is perhaps a little too low, there is no church of any scale or country in which the internal design is, on the whole, more skilfully managed. The leading design of the elevation is that of the lofty pier-arch and tall clerestory, with only a small triforium between them. It is a problem in such a case to design the triforium so as to make it a subordinate, or at least an intermediate feature, and yet not to make it insignificant. It should not be either so prominent or so unimportant that anybody could wish it away. We admire, perhaps without altogether approving, the glazed triforium at Saint Ouen's, and, on a smaller scale, in the choir of Saint Peter's at Chartres. But this is not the purpose of a triforium. It suggests the retort that, if you want more glazed space, you should make a longer clerestory; and the clerestory in both those churches is quite long enough. The Limoges triforium is, as it should be, an essentially internal feature, a modest feature, a feature not asserting any special prominence, but whose absence would at once form a blank. The transepts, too—a difficult part of the building to deal with in these churches without central towers—are dealt with here with thorough skill. The architect of Limoges cathedral tried the same experiment which was tried by the architects of St. Mary Redcliff and of Bath Abbey. He made his transepts considerably narrower than the nave and choir. At Limoges, where there was to be no central tower, it was open to the designers to make the transepts narrower if they chose. At Bath it had the absurd effect of making the central tower oblong, as it doubtless would at Redcliff, if the tower had ever been finished. But even in the other cases the experiment was a daring one, and we cannot help thinking that the experiment at Limoges succeeded better than the experiment at Bristol. The transepts, somewhat like the triforium, are after all a secondary feature, specially when there is no central tower. They must be not insignificant, and yet they must not be so prominent as to overshadow the eastern and western limbs. At Limoges, where there never can be any real west front, we might have approved of a great façade to the transept better than in some other places. But the narrowness hindered anything like the great fronts of Chartres; the designer adapted himself to his conditions; instead of a rose window, to which there was not breadth enough to do justice, he made a very noble pointed window with a prominent spherical square. Within, the narrowness at once marks the transept as subordinate, and at the same time gives it a character of its own; the effect of height is of course greater than in the wider parts of the church. The experiment in short has succeeded. We do not, as in some French churches, wish the transepts away on the ground of insignificance, nor yet do we feel, as in some others, that they have taken to themselves an importance which belongs only to the east and west ends of the building. And the discretion of the Limousin builders seems to have lived on through many generations. The church went on building, with some interruption, from 1273 to 1554, and the difference between the work of different dates is plain enough. Yet all is thoroughly harmonious. We see that there is work of different dates, not by any change in the general effect, but wholly by the details, mainly by the change in the tracery of the windows which in the western parts of course becomes Flamboyant—good Flamboyant, be it observed. There is no building in which one can better sit and gaze and muse—looking of course eastward or else across—than in St. Stephen's at Limoges. The effect of some of the vaster churches is more overwhelming; there is none which is more thoroughly satisfactory, none which is at once more pleasing to the eye and more thoroughly commends itself to the critical judgment. If there is



a fault, it is that the vaulting arch is a little too flat; but its flatness is not so great as to have the same killing effect as in the metropolitan church of Rouen.

### THE SCOTTISH SOCIETY OF WATER-COLOUR ARTISTS.

THE exhibition of the Scottish Society of Water-Colour Painters has been opened in Glasgow, and on the 17th inst. the annual luncheon was given. Mr. Francis Powell, R.W.S., president of the society, was chairman.

Mr. James Muir, in proposing the toast of "The Scottish Society of Water-Colour Artists," said that some who were present might be surprised to learn that in 1761 there took place in Glasgow the first exhibition ever held in the Kingdom of Scotland. It was held under the auspices of men who might be called the pioneers of art in Scotland—the brothers Foulis. It was held in the open air, in the quadrangle or court of the university. As showing the manner in which the pictures were hung, he mentioned that a very famous picture by Rubens, *Daniel in the Lions' Den*, was placed two-thirds up the steeple, immediately over the bust of Zachary Boyd, which many people would doubtless recollect. The academy of the Foulis's was not a success, and was ultimately broken up and sold in London at ruinous prices. In 1821 an enterprising gentleman named Alexander Findlay, the father of a well-known printseller, got together a loan collection and exhibited it and formed what might be called the first institute which Glasgow had for the promotion of the fine arts. Two exhibitions only were held, and then there was a hiatus of six or seven years, when the Dilettanti Society sprung up and held exhibitions for a long time in the Argyll Arcade. The exhibition was removed to 51 Buchanan Street, with the result that it collapsed in the year 1838. After that there was another hiatus of two years till 1841, when one of the most meritorious movements was originated which had ever been started in the West—he referred to the West of Scotland Academy. Exhibitions were held in the Argyll Arcade; but the premises being required for a warehouse, the Academy removed to Buchanan Street. The exhibition was closed in a couple of years. The Academy continued to enrol members till 1864, and it was not till 1879 that the final meeting was held. He thought, from what he had stated, it would be seen that Glasgow had taken an interest in art from the very earliest times. That interest had been taken under the most adverse circumstances, and quite apart from the influence of that commercial spirit which drove men to do things merely for the purpose of making money. It was in 1861 that the Institute of the Fine Arts had been begun. Through bad report and good report it had continued to prosper, until it was in the position of being able to hold out a helping hand to one of what he considered the finest societies in Scotland—the Society of Water-Colour Painters.

The chairman, on behalf of the society, heartily thanked the gathering for the manner in which they had honoured the toast. Many of those present were doubtless familiar with the earliest efforts of the society; he was sure they were all pleased to mark the steady progress which they had made. Some eight years ago many of the artists who now had pictures on the walls could scarcely be said to have painted a water-colour picture, partly owing to want of encouragement and partly owing to the way in which water-colours were treated at some of the exhibitions. This slighting treatment of a refined art determined some of them to establish a society on the lines of the Royal Water-Colour Society of London. The Scottish Water-Colour Society was the outcome of that determination. The art of water-colour painting had suffered from many aspersions, which, however, had been proved to be utterly false. Sometimes it had been said that the body colour of the Chinese white turned black; sometimes that the pictures were thin and poor; and sometimes it was objected that there was glass over the pictures. But the most persistent attack was the allegation of want of durability. Now, in the first place, Chinese white did not turn black. Again, it was not the case that water-colours were necessarily thin and poor; and as to the glass before them, had they not seen some of the most cherished old pictures with glass before them, and was it not a good thing to preserve pictures beneath glass? He had had the good fortune this spring to see two water-colours of very ancient date. One was a portrait of Guillaume Budé, dated 1467, and the other a portrait of Doge Verdomini, dated 1475. He could assure those present that they were as fresh, as beautiful, and in as perfect condition as if they had only been a year old. In Liverpool, at present, there was a most important exhibition of water-colour art at the Walker Art Galleries, the like of which might never occur again. It was an exhibition under one roof of the works of the three leading water-colour societies of London. It was most interesting and instructive to mark the difference in the style of the three. They might almost belong to three individual schools. In going over the exhibition one was forcibly struck by the greater refinement of the water-colour pictures over these in oil in the neighbouring rooms. He afterwards mentioned, for the benefit of his professional friends,

that the best works were by those artists who most carefully noted the smaller beauties of nature, and showed a love for the humbler phases. They saw the same thing in the works of their best writers, who endeared themselves by a care of humble things. Look at their own great national poet Burns; and then there was that celebrated word-painter Ruskin. Did any of them recollect how he glorified the common lichen? He called it "the humblest and most honoured of earth's children," and he said that "it is strong in lowliness, that it neither blanches in heat nor pines in frost. The worm frets it not; the autumn wastes it not; sharing the stillness of unimpassioned rock, it shares also its endurance; while the winds of departing spring scatter the white hawthorn blossom like drifted snow; when the summer dims on the parched meadows the drooping of its cowslip gold; far above among the mountains the silver lichen-spots rest star-like on the stone; the gathering orange-stain on yonder western peak reflects the sunset of a thousand years." If the Scottish Society received the encouragement it deserved, he felt sure that Scotland might in time come to be as proud of her water-colourists as she was of her oil-painters.

### LEGAL.

Walsall County Court.—October 16.

(Before Mr. W. D. GRIFFITHS, Judge.)

ROARKE v. BODEN.

EMPLOYERS' LIABILITY ACT.

In this case the sum of 150*l.* was claimed. The defendant contracted for repainting the Walsall Guildhall. The plaintiff was engaged by him as a scaffolder, and in one room he had erected a scaffold in the usual manner. When he went to another room defendant told him not to put up a scaffold, but to work with two ladders and a plank from the one to the other, so as to form a stage. He alleged that after he had fixed the plank and ladders, and properly spragged them, the defendant's foreman altered the arrangement by putting one of the ladders more upright, the result being that the plaintiff was thrown down and injured about the arm and side to such an extent that he was an inmate of the Cottage Hospital for ten days, and had since been out-patient and unable to work. His Honour held that the fact that the position of the ladder was altered by the foreman was not conclusive as to the cause of the accident, or as to negligent employment, and nonsuited the plaintiff.

### ENGINEERING WORKS.

**Becles Bridge.**—A new road-bridge, 94 feet long, over the river Waveney, and connecting the counties of Norfolk and Suffolk, has been opened. The main girders are placed 20 feet apart in the clear, forming a roadway of that width, which is supported upon Messrs. Lindsay & Co.'s patent plough-rolled steel flooring, No 5 section, weighing 30 lbs. per foot super. This floor is rivetted to the bottom booms of the two main girders, and is filled in with concrete. The continuous main girders rest upon four cast-iron screw piles, of 30 inches diameter in the shaft, and of one-inch metal, and having the screw 4 feet in diameter, with a pitch of 6 inches; and at the ends upon masonry abutments. The centre span of bridge between the screw-piles is 50 feet from centre to centre, and forms the present navigable channel of the river. The side spans are each 20 feet in the clear. The piles are screwed down about 30 feet below the bed of the river, resting upon a bed of coarse gravel, and are filled in with cement concrete. Each pair of piles are braced by an iron girder at the low-water level. The abutments and wings are constructed of ashlar work from the materials obtained from the old bridge, and rest upon timber pile-work and concrete. The superstructure of the wings is formed of ashlar quoins and dressed flint work, laid in courses. Four of Messrs. Macfarlanes' No. 6 gas lamps are fixed, one at each end of the main girders. The whole of the iron-work in the bridge has been supplied and erected by Messrs. Head, Wrightson & Co., of Stockton-upon-Tees, and Mr. T. H. Blyth, of Foulsham, Norfolk, has executed the rest of the bridge-work and the approaches. The cost of the new work approaches 3,000*l.*

**Inland Navigation.**—A meeting of the Liverpool Engineering Society was held on the 8th inst., Mr. R. R. Bevis, jun., in the chair, when a paper entitled "Inland Navigation Works Abroad," was read by Mr. R. L. Tapscott. The author, in treating of his subject, dwelt on the accomplishment of the great canal works of recent years as a result of the improvements in the various mechanical appliances now substituted for hand labour, and the benefits thence arising, instancing the successful maintenance of the Suez Canal as the forerunner of the many suggestions for inland navigation now brought forward. Admitting the difficulties of the Panama Canal to be considerable, he held that they were yet of a similar nature to what have been overcome before; but, all taken together, presented an unparalleled series. Whatever the cost, however, the work had every appearance of proving a financial success. Passing on, the Amsterdam Canal was



instanced as illustrating the surmounting of difficulties which the early part of this century dare not approach. Amongst the other works and schemes mentioned were the entrance to the Mediterranean by means of the Garonne River, the flooding of the Sahara, the draining of the Zuyder Zee, the improvement of the Neva, and the piercing of the isthmuses of Malacca, Florida, and Corinth.

### CHURCH BUILDING AND RESTORATION.

**Durham.**—A new Congregational church is about to be erected in Claypath, Durham, from the designs of Mr. H. T. Graddon, architect, of that city. The church will accommodate 480 persons, and will be built of stone throughout, in the Early Geometrical style of Gothic architecture. A handsome tower and spire, over 100 feet high, will adorn the main front.

**Glasgow.**—A large church has been completed for the congregation hitherto worshipping in Wellington Street United Presbyterian Church. It occupies the corner of Ann Street, Hillhead, immediately to the north of the Glasgow University. The principal front of the church consists of a portico of ten fluted Corinthian columns, approached by an open flight of steps. Three large outer doorways lead into the vestibule; four doors open from the vestibule into the area floor of the church, while stairs on each side lead to the galleries. At the north end of the church other two gallery stairs are provided, and there is a spacious corridor on each floor. The church itself is about 90 feet by 60 feet, and 47 feet high inside. Its general form is rectangular on plan, with a gallery recess at the south end and an organ recess at the north, the latter being covered by a half dome, richly moulded and decorated. The ceiling of the church consists of three arched or vaulted spans, carried on two longitudinal beams stretching from end to end of the church, and without pillars. The sides of the ceiling are coved and groined, and the whole is enriched with arched ribs and panels. The construction of the roof is of a novel character, consisting of two lattice girders, about 80 feet long and over 7 feet deep, stretching from end to end of the church. Between these two girders the middle arch of the ceiling rises, and between the walls and the girders the side arches spring, and the ceiling is thus supported entirely on the girders and side walls. The roof principals and purlins are also of iron. The church is provided with side and end galleries, and seats 1,050 persons, with a liberal allowance of space to each. The width of exits is nearly 50 per cent. in excess of the minimum rule laid down by authorities on this subject, and all the doors open outwards as well as inwards. The acoustic qualities of the church have been the subject of careful study, and all that experience could suggest has been done to make the undertaking successful in this respect. The proportions of the building, form of ceiling, the setting out of seats, and the materials used throughout the interior have all been considered with regard to their influence on sound. To the north of the church are situated the hall, 50 feet by 35 feet, with an end gallery; the library, 35 feet by 21 feet; and session-house, vestry, ladies' room, and numerous class-rooms, together with a church officer's house. The total length of the building, including the outside stair, is about 200 feet, and its width at the north end is 100 feet. The height of the apex of pediment above University Avenue is about 75 feet. The columns of the portico and side walls, of which there are twenty, are 35 feet high and 3 feet 6 inches diameter. The total cost of the building (exclusive, however, of the cost of site, organ, furniture, &c.) is 15,000*l.* Mr. T. L. Watson, F.R.I.B.A., is the architect.

### SCHOOL BUILDINGS.

**Morley.**—The new Wesleyan Sunday Schools are now complete. The walls are of Morley Finsdale stone. The buildings include an assembly room, 55 feet by 36 feet, on the ground floor, on three sides of which is a gallery, the total height from floor to ceiling being 33 feet 6 inches. The rostrum is placed at the end of the room, and will accommodate ten or a dozen persons. The room is lighted by two large two-light windows in the gable, with windows also along each side wall. The ground floor will seat 500 and the galleries 400, making total accommodation in large room 900. The columns supporting the gallery are continued up to the ceiling line, dividing the roof into three parts, forming nave and side aisles. Along the sides of the ground and gallery floors are provided twelve class-rooms, each 12 feet by 9 feet, also four 14 feet 6 inches by 12 feet, and four larger ones 18 feet by 17 feet 6 inches, making twenty in all. A commodious infants' school, compact in plan, well lighted, and thoroughly adapted for its purpose, is provided in the basement, giving 8 square feet per child. This room will accommodate 300 infants. There are two entrances from Queen Street to the infants' school, and two also from the chapel yard into the assembly room, which form the connecting link to the chapel. The finished wood-work inside is of pitch pine, varnished. The schools have been designed by and carried out under the supervision of Mr. Walter Hanstock, architect, Batley, and have cost the sum of 3,468*l.* 3*s.* 11*d.*, which, with lighting, heating, furnishing, fence walls, &c., may reach 4,200*l.*

### GENERAL.

**An Art Exhibition** has been opened in Brighton in aid of the building fund of the local science and art school. The collection of paintings is considered to be the most important of all those which have been seen in the town.

**The Exhibition** of the Scottish Society of Water-Colour Painters was opened in Glasgow on Saturday. On the first day thirty-two pictures were sold for 463*l.* 5*s.* The highest price, 65*l.*, was paid for Mr. Francis Powell's *Vessels Becalmed at the Mouth of the Clyde*.

**An Exhibition of Photographs and Photographic Apparatus** will shortly be held in Dublin under the control of the Photographic Society of Ireland.

**The Oldest Church** in America is one supposed to be in the village of Tadousac, which was erected in 1517 by Jacques Cartier. It measures about 20 feet square.

**The Late Mr. H. G. Bohn's** art collection is now being prepared for sale, but as yet is not open to public inspection.

**Messrs. H. Young & Co.** have completed the casting of the bust of the late Archbishop Tait, by Signor Raggi. It is to be placed in the Edinburgh University.

**The West Hartlepool Improvement Commissioners** have approved plans prepared by Mr. G. G. Hoskins, F.R.I.B.A., for the carrying out of extensive additions to Messrs. J. Backhouse & Co.'s banking premises in Church Street in that town.

**The Belfast Central Railway** is announced for sale. The original cost was 700,000*l.*, and the price now asked is 250,000*l.*

**Dr. Kayser**, of Berlin, has succeeded in photographing a flash of lightning. When the photograph was magnified four times, it could be seen that the flash consisted of four distinct parallel streams, the thickest of which looked like scales placed horizontally. Between the first and second streams were alternate bright and dark stripes. The second and third streams were very close together, while there was a greater distance between the third and fourth.

**Mr. Vanderbilt** has made a donation of 500,000 dollars to the College of Physicians and Surgeons in New York, to be used as a building fund.

**Mr. Albert Vickers**, of Somerset Chambers, 151 Strand, London, is preparing the design for St. Mary's New Church (Roman Catholic) at Leek, Staffordshire, for the Rev. Alfred M. Sperling.

**The Redruth School Board** have accepted the design of Mr. John Robert Nichols, architect (of the firm of Messrs. Geo. Berry Nichols & Sons), 59 Colmore Row, Birmingham, and 54 Queen Victoria Street, London, E.C., for new schools at Trewirgie.

**Incorporation of Mary's Chapel, Edinburgh.**—At the annual meeting of this ancient incorporation held on Monday, Mr. George James Beattie, builder, was re-elected Deacon of the Masons, and Mr. Robert Paterson, architect, was re-elected Deacon of the Wrights. Mr. John White, plumber, was at the same time elected treasurer, and Messrs. Macandrew and Blair, C.A., conjoint clerks to the Incorporation.

**Building** is still going on in an extensive manner both in the town of Königsberg and in the provinces. Government buildings, and particularly barracks and buildings in connection with military affairs, are being carried out all over the province, particularly towards the Russian frontiers, where accommodation for large numbers of troops are erected in all directions.

**Mr. T. Smith Woolley** will deliver an address, as President of the Surveyors' Institution, at the opening meeting of the session on November 10.

**The Reading-room** at the Vatican Library is now open to students. No document later than 1815 can be examined. All notes or extracts must be shown to the librarian before leaving.

**The Visitors to the Health Exhibition** are likely to exceed 4,000,000 in number before the closing on the 31st inst. At the end of last week there was a total of 3,737,720.

**A Circular Pulpit**, in alabaster, to the memory of the late Mr. Edmund Robins, has recently been erected in All Souls Church, St. John's Wood. The work has been admirably executed by Messrs. Farmer & Brindley, from designs of Messrs. Wadmore & Baker.

**Messrs. Craig & Rose**, of Southwark Street, have undertaken the manufacture of Wilkins's Fire-Resisting Composition, which has lately been tested in Edinburgh without showing any failure.

**Messrs. Arch. Smith & Stevens**, of Queen's Road, Battersea, have been instructed to erect, at Colonel Wombwell's residence, Upper Brook Street, Grosvenor Square, a new hydraulic passenger lift, upon Stevens and Major's patent suspended principle.

**Mr. A. E. Dobbs** has issued an abstract of the cost of his litigation with the Grand Junction Waterworks Company. His law costs amounted to 1,497*l.* The company repaid 767*l.* taxed costs. His total expenses amounted to 1,561*l.*, towards which the Corporation of London, Vestries, and District Boards contributed 847*l.*, and other donors made up the total to 1,667*l.*, leaving a balance in hand of 107*l.* Mr. Dobbs claims that he has reduced the rental on which the water companies charged in the metropolis from 35,026,577*l.* to 28,990,289*l.*



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, OCTOBER 25, 1884.

### TENDERS, ETC.

\* \* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

\* \* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—  
"Contract Supplement to THE ARCHITECT."

### COMPETITIONS OPEN.

**BOMBAY.**—Nov. 6.—The Municipal Commissioner of Bombay invites Designs and Estimates for a New Municipal Hall and Offices, which must be sent to his Office by Twelve noon, on Nov. 6. A Premium of 5,000 rs will be given for the Design most approved of by the Commissioner, with the assistance of a Committee of the Corporation; 3,000 rs. for the second, and 2,000 rs. for the third. The total cost of the buildings is not to exceed 5 lacs (5,00,000 rs.). Mr. E. C. K. Ollivant, Municipal Commissioner's Office, Bombay, or at Messrs E. W. & R. Oliver, 1 Corbet Court, Gracechurch Street, London.

**SOOTHILL.**—Nov. 6.—Plans are Required for a Board School proposed to be Erected in Gregory Street. Mr. J. D. Good, Market Place, Dewsbury.

### CONTRACTS OPEN.

**ALLOA (SCOTLAND).**—Nov. 14.—For the Construction of a Goods Station for the Caledonian Railway Co. Messrs. Crouch & Hogg, C.E., 175 Hope Street, Glasgow.

**BELFAST.**—For Rebuilding Premises in Exchange Court, Donegall Street. Mr. E. J. Byrne, Architect, 4 Waring Street.

**BELFAST.**—Oct. 28.—For Erection of the Thompson Memorial Fountain at Bedford Street. Messrs. Young & Mackenzie, Donegall Square East.

**BOMBAY.**—Nov. 14.—For Masonry and Excavation of Wet Dock (25 acres area), to include Wharf Walls (7,750 feet), Sea Entrance, &c. Mr. J. A. McConnochie, C.E., Engineer's Office, Surrey Commercial Docks, Rotherhithe.

**BOURNEMOUTH.**—Nov. 1.—For the Erection of a Bazaar. Messrs. Kemp-Welch & Pinder, Architects, Bournemouth.

**BRADFORD.**—Nov. 1.—For the Erection of a Post Office. Postmaster, Bradford.

**CARLOW (IRELAND).**—For the Erection of a Market-place, Town Hall, and Offices. Mr. Wm. Hague, Architect, 62 Dawson Street, Dublin.

**CHelsea.**—Nov. 4.—For Extension of Infirmary Laundry. Mr. Wm. Miller, 250 King's Road, Chelsea, S.W.

**COLCHESTER.**—Oct. 29.—For Erection of Two Pairs of Cottages in Rawston Road. Mr. J. W. Start, Architect, Head Street.

**DENHOLME CLOUGH (YORKS).**—Oct. 31.—For Alterations to Chapel. Mr. Herbert Holgson, M.S.A., 68 High Street, Queensbury.

**DUNDEE.**—Oct. 29.—For Enlargement of Post Office. Postmaster, Dundee.

**DUNDALK.**—Oct. 25.—For Construction of Works of Water Supply. Messrs. Hassard & Tyrrell, C.E., Westminster Chambers, Westminster.

**EALING.**—Nov. 3.—For Erection of Public Baths. Mr. C. Jones, C.E., Local Board Office, Ealing.

**ELLAND (YORKS).**—Oct. 29.—For Additions to Wood-side Flour Mills. Messrs. Horsfall & Williams, Post Office Buildings, Halifax.

**FLEETWOOD (LANCS).**—Oct. 30.—For the Erection of Shops in East Street. Mr. C. Pearson Shaw, 37 St. Peter's Place.

**FULSTOW (SOUTH LINCOLN).**—Nov. 3.—For Erection of Farmhouse, Offices, and Engine Shed. Mr. E. W. Farebrother, A.R.I.B.A., Victoria Chambers, Grimsby.

**GOSFORTH.**—For the Erection of Stabling, Tram-car Sheds, &c. Mr. Edward Shewbrooks, F.R.I.B.A., 2 Market Street, Newcastle.

**HEADINGLEY.**—Oct. 28.—For Additions and Alterations to a House. Mr. Charles Fowler, A.M.I.C.E., Britannia Buildings, Leeds.

**HUNSLT (LEEDS).**—For Erection of Two Houses. 29 Queen Street, Stourton, Hunslet.

**KIDWELLY (WALES).**—Nov. 1.—For New Roof and Repairs to Church. Mr. J. Shankland, Bridge Street.

**KING'S LYNN.**—Nov. 5.—For Erection of Stables, Provender Stores, &c., for the Urban Sanitary Authority. Mr. E. G. Mawbey, Borough Surveyor.

**KINSALE (IRELAND).**—For the Erection of a Perch on Farmer Rock for the Harbour Commissioners. Harbour Master, Kinsale.

**LEEDS.**—For Enlargement of St. Columba Presbyterian Sunday-school. Messrs. Richard Towse & Son, Architects, Dewsbury Road.

**LEEDS.**—Oct. 28.—For Erection of Cattle Lair. Mr. Thos. Hewsen, M.I.C.E., Borough Engineer, Municipal Buildings.

**LEEDS.**—Nov. 6.—For Erection of All Hallows Church, Hill Top, Burley. Messrs. Adams & Kelley, Architects, Imperial Buildings, Bond Street.

**LEICESTER.**—Oct. 28.—For the Erection of a Boiler-house and Shaft at Workhouse. Mr. Stockdale Harrison, St. Martin's, Leicester.

**LINCOLN.**—Oct. 25.—For Sluice at Wainfleet Haven, with Outfall Cut, Enlargement of Bridges, &c., and Forming New Cut, Skegness. Mr. S. E. Williams, C.E., Bridge Street, Boston.

**LYME REGIS.**—Oct. 25.—For Reseating Parish Church, Building Vestry, &c. Mr. R. W. Hillman, Solicitor, Lyme Regis.

**MILLOM (CUMBERLAND).**—Nov. 1.—For Erection of Six Cottages in New Wellington Street. Holborn Hill Industrial and Co-operative Society, 29 Albert Street, Milloom.

**NEATH.**—Oct. 29.—For Construction of Reservoir, Laying Water Mains, &c. Mr. W. E. Thomas, Surveyor, 58 Water Street, Neath.

**NENAGH (IRELAND).**—Oct. 30.—For Erection of Laundry and Drying Room. Mr. J. Houston, Shechan, Clerk to the Union.

**NETHER BUCKIE (SCOTLAND).**—Nov. 8.—For Erection of New Buildings. Messrs. Bruce & Sunderland, Architects, Banff and Buckie.

**NEW ROSS.**—Oct. 29.—For Construction of Iron Viaduct with Swing Bridge over the River Barrow. Drawings, &c., at the Engineer's Office, Bray, co. Wicklow.

**NOTTINGHAM.**—Oct. 25.—For Building Five Shops, Gedling Street. Mr. Brown, Borough Engineer, Municipal Offices, Nottingham.

**Oporto.**—Dec. 15.—For Construction of Covered Market. Senor J. A. Correa de Barros, President of the Municipal Board of Oporto, Portugal.

**PENRHYNCEIBER (WALES).**—Nov. 5.—For Erection of Infant School for the Llanwanno School Board. Mr. M. Cole, Architect, Pentrabach, Pontypridd.

**PONTYPRIDD.**—For Erection of House in Llantwit Fardul. Mr. James Lloyd, Architect, Pontypridd.

**ROTHERHAM.**—Oct. 29.—For Completion of Shop and other Work for the Market Committee. Borough Surveyor.

**SWANSEA.**—Oct. 27.—For Erection of Wall at Dan-y-Craig Cemetery. Borough Surveyor, Guildhall.

**TURTON.**—Oct. 29.—For Erection of Public Offices at Birtenshaw Road, Bromley Crdss, for Local Board. Mr. L. B. Goulburn, Clerk to the Local Board, 21 Bark Street, Little Bolton.

**WALTHAM ABBEY.**—Nov. 3.—For Construction of Dwarf Boundary Walls, Paths, and Surface Drains in the Cemetery. Mr. C. W. Wiggs, Surveyor, Waltham Abbey.

**YARMOUTH.**—Oct. 27.—For Enlargement of Post Office; Postmaster, Yarmouth.

### TENDERS.

#### ABERDOUR.

For the various Works of Dwelling-house on the Farm of Sauchentree.

##### Builders' Work.

Corbeth & Keith, New Pitsligo	£62 10 0
Park, Strichen	61 10 0
W. & J. Murray, New Pitsligo	69 15 0
Robb, New Aberdour	59 15 0
Scott, New Pitsligo	57 0 0

##### Carpenters' Work.

J. F. Duncan, New Aberdour	105 10 0
Sinclair, Fraserburgh	98 0 0
W. Sherren, Fraserburgh	93 17 0
Scott, Rosehearty	81 14 0
Blake, New Pitsligo	80 0 0
J. F. Sherren, Fraserburgh	78 15 0
J. & A. Morrison	76 1 6

##### Plasterers' Work.

Wiseman, Fraserburgh	23 17 0
Law, Fraserburgh	23 6 0
J. Duncan, New Pitsligo	19 10 0

##### Slaters' Work.

Morrison, Fraserburgh	24 19 0
Reid, Fraserburgh	24 18 0
Hutcheson, Rosehearty	24 18 0
Merson, Strichen	21 10 0

For New Cottage in Aberdour, by Fraserburgh.

Wallace, New Pitsligo, carpenter	£102 0 0
Duncan, New Aberdour, carpenter	99 15 0
Robb, New Aberdour, mason	92 19 0
Wiseman, Fraserburgh, slater	38 10 0
Low, Fraserburgh, plasterer	33 0 0
Reid, Fraserburgh, slater	27 17 0
Duncan, New Pitsligo, plasterer	27 0 0
Merson, Strichen, slater	26 18 0

#### BASINGSTOKE.

For Alterations to Lesser Market. Mr. H. BUDDEN, Borough Surveyor.

Sims	£286 13 0
Mussellwhite	281 0 0
Blunden	278 0 0
Goodall	274 10 0
Watson	182 10 0

#### BEGUILDY (RADNOR).

For the Erection of a New Vicarage. Mr. E. H. LINGEN, BARKEIL, Architect.

Price & Deakins, Knucklas, Knighton	£1,657 0 0
Williams, Knighton	1,573 0 0
Davies & Son, Newtown, Montgomery	1,541 0 0
DOWLAND, Kenilworth (accepted)	1,496 0 0

#### CAMBERLEY.

For Building a Residence, for Major Charles Cooper-King, R.M.A. Mr. J. H. MONEY, Architect, The Broadway, Newbury, Berks.

Kingerlee, Oxford	£2,595 0 0
Simmonds, Reading	2,590 0 0
Claridge, Banbury	2,495 0 0



## CARDIFF.

For Additions to Maindy Schools, Cardiff. Mr. J. P. JONES, Architect, 27 Park Street, Cardiff.	
JONES BROS. (accepted)	£195 0 0
For Additions to the Ship Hotel, Barry, for Colonel Romilly. Mr. J. P. JONES, Architect, 27 Park Street, Cardiff.	
JONES BROS. (accepted)	£230 0 0
For Repairing, Painting, and Renovating Portions of the Town Hall, for the Corporation of Cardiff. Mr. WM. HARPUR, A.M.I.C.E., Borough Engineer.	
Thomas	£475 0 0
Davis & Sons	318 10 0
CADOGAN (accepted)	280 0 0

CARLETON (PONTEFRAC).  
Accepted Tenders.

For a Dwelling-house and Outbuildings for Mr. Thomas Huley. Mr. WILLIAM SHACKLETON, Architect, Pontefract.	
Taylor, excavator, bricklayer, and mason	£138 19 6
W. & C. Wilcock, carpenter and joiner	129 0 0
Stewart, slater	30 0 0
England, ironmonger, plumber, and glazier	22 6 6
Binns, plasterer	21 0 0

## COLCHESTER.

For Alterations and Repairs at Lexden, for Mrs. P. A. Howell, of London. Mr. J. W. STARR, Surveyor, Colchester.	
Ward	£72 0 0
Chambers	71 0 0
Eade	69 19 0
GLADWELL (accepted)	65 0 0
For Repairs at Rose Cottage, Peldon, for Mr. J. G. Grant. Mr. J. W. STARR, Surveyor, Colchester.	
Oldridge	£46 0 0
Chambers	43 10 0
AMBROSE (accepted)	41 0 0

## CREWKERNE.

For a Pair of Semi-detached Residences for Mr. Thomas Palmer. Mr. HERBERT J. JONES, Architect, Bristol.	
Hitching, Parkstone	£2,394 4 10
Bastow, Bristol	1,958 0 0
*Lye & Sons, Crewkerne	1,950 0 0
Church, Bristol	1,827 0 0
E. & T. Hatherly	1,800 0 0
Hann, Beaminster	1,793 0 0
Lewis, Bristol	1,750 0 0
Cowlin & Son	1,750 0 0
Green, Clevedon	1,648 18 4

## DERBY.

For Works in Harrington Street, Peartree Street, and Rutland Street, for the Town Council of Derby. Mr. T. COULTHURST, Borough Engineer, Full Street, Derby.	
Currall & Lewis, Birmingham	£4,321 7 11
Cardan & Co., Birmingham	3,791 14 4
Carden, Nottingham	3,465 7 8
Todd, Derby	3,333 11 10
Turton, Derby	3,222 0 6
Knight, Loughborough	2,984 15 0
TOMLINSON BROS., Derby (accepted)	2,913 0 0
Surveyor's Estimate	3,109 0 4

## ENFIELD.

For the Erection of Store-house, Coach-house, Stables, &c., being the First Portion of New Brewery Stores, London Road, Enfield, N., for Messrs. Savill Bros. Mr. FREDERICK A. ASHTON, Architect, Stratford, E.	
HEARLE & SON (accepted)	£750 0 0

## FARNBOROUGH.

For the Execution of Sewerage and Outfall Works. Mr. J. R. SISTERSON, Surveyor. Quantities by Surveyor.	
Bottom Bros., Battersea	£2,280 0 0
Green, Epping	2,250 0 0
Bath & Blackmore, Clapham	2,162 0 0
Howard, London	2,042 9 8
Hughes, Aldershot	2,010 0 0
Hall, Portsmouth	1,874 0 0
Adams, London	1,794 0 0
Hayter, Landport	1,742 0 0
Hayward, Eastbourne	1,737 0 0
Crook & Smith, Southampton	1,693 0 0
Cooke & Co., Battersea	1,670 0 0
Evans Bros., Wallingford	1,618 11 8
Smith, Newcastle-on-Tyne	1,603 8 5
Pool & Son, Hartley Wintney	1,523 0 0
Saunders, Northam	1,498 0 0
Wells & Co., Aldershot	1,428 0 0
Young & Co., Skegness	1,330 0 0
TRIMM, Horsham (accepted conditionally)	1,288 0 0

For Supplying and Laying Cast-iron Pipes, &c., at Hartley Row.	
Bath & Blackmore, Clapham	£2,493 0 0
Slidder & Co., London	1,650 0 0
Wells & Co., Aldershot	1,658 0 0
Child, Southwold	1,640 18 3
Chandler & Son, London	1,428 18 0
Hall, Portsmouth	1,410 4 0
Wood, York Town	1,370 2 2
Green & Burlleigh, London	1,360 0 0
Bottoms Bros., Battersea	1,358 0 0
Laidlaw & Son, London	1,296 7 0
Cooke & Co., Battersea	1,280 0 0
Crook & Smith, Southampton	1,256 0 0
Green, Dartford	1,235 7 5
Young & Co., London	1,235 0 0
Evans Bros., Wallingford	1,215 11 0
Howard, London	1,190 0 0
Smith, Newcastle-on-Tyne	1,162 15 6
Saunders, Northam	1,158 0 0
J. Young & Co., Skegness	1,154 12 6
Procter, Sutton	1,099 8 7
Pool & Son, Hartley Wintney (accepted)	1,040 0 0
Trium, Horsham	1,019 0 0
Greenaway, Slough	8s. 4d. and 8s. per yard

## GORING (OXON).

For the Erection of a Villa for Mr. E. H. Bayldon. Mr. J. S. DODD, Architect, Reading.	
Higgs, Goring	£2,374 0 0
Brasher & Son, Wallingford	2,285 0 0
Kierlee, Oxford	2,195 0 0
Wernham, Reading	2,166 0 0
Bottrill, Reading	2,098 0 0
SIMONDS, Reading (accepted)	1,987 0 0

## GORLESTON.

For the Erection of Three Cottages and Shop, Gorleston. Mr. H. DUDLEY, Architect, Arcutt.	
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## WHOLE TENDERS.

Howes	£957 0 0
Whall	880 0 0
Bray	833 0 0
Want	749 0 0
Grimble & Watts	745 0 0
Flaxman	739 0 0
LEGGETT (accepted)	713 0 0
Barnard	690 0 0
Cork & Beech	550 0 0

## SEPARATE TENDERS.

## Bricklayer, Plasterer, and Tiler.

Howes	590 0 0
Barwood	450 0 0

## Carpenter.

Knight	318 0 0
Leggett	263 10 0
Grimble & Watts	258 10 0
Lamb	239 0 0

## Painter, Plumber, and Glazier.

Story	70 0 0
Read	51 10 0
Gooda	45 0 0
Blyth	36 0 0

## HAVERHILL.

For the Erection of New Retort-house at the Gasworks, for the Local Board. Mr. C. WOODALL, Engineer.	
Cooke & Co., London	£648 15 0
Arber, Haverhill	390 5 7
MASON & SON, Haverhill (accepted)	340 0 0

## KIRKHAM (LANCS.).

For Erection of Four Houses and One Shop in Whiteside Street. Mr. E. BUSH, Surveyor, Preston.	
Swarbrick, Preston, excavator, drainer, and bricklayer	£195 0 0
Macgregor, Preston, carpenter and joiner	164 0 0
Clarkson, Preston, flagger and slater	119 0 0
Harrison, Preston, mason	51 0 0
Woods & Hathersall, Preston, plumber, glazier, and painter	41 0 0
Arrowsmith, Preston, plasterer	36 0 0
Sims & Son, Preston, grates, ranges, &c.	16 6 0
Total	£622 6 0

## LEEDS.

For Erection of Two Houses in Regent Park, Hyde Park Corner. Mr. D. DODGSON, Architect, Leeds.	
Firth, Leeds, joiner.	
Hirst, Leeds, bricklayer and mason.	
Watson, Leeds, plumber.	
Haddock, Armley, plasterer.	
Atkinson, Leeds, slater.	
Walker, Idle (near Leeds), painter.	

## LIVERPOOL.

For Heating the Offices of the Shipowners' Supply Association, Atherton Street, Liverpool.	
RENTON GIBBS (accepted).	

For Heating Apparatus for Messrs. Laurie & Bishop, at 55 Bradford Street, Birmingham.	
RENTON GIBBS (accepted).	

For Heating Messrs. Pearce & Thompson's Premises, 40 Vyse Street, Birmingham.	
RENTON GIBBS (accepted).	

For a Patent Heating Apparatus at Emmanuel Church School-rooms, Market Drayton.	
RENTON GIBBS (accepted).	

## LONDON.

For Shops to be Erected in Brent Street, Hendon. Second Contract. Mr. BANISTER FLETCHER, Architect.	
ELLACOTT (accepted)	£1,400 0 0

For Additions to Anglebay, Woodchurch Road, West Hampstead, for Mr. Banister Fletcher.	
MANEBIDGE (accepted)	£220 0 0

For Alterations and Decorations to No. 47 Longridge Road, Earl's Court, for Messrs. Kennett. Mr. ALFRED WRIGHT, Architect, 190A Brompton Road, S.W.	
Hayden	£433 0 0
Cook	319 0 0
Johnson	280 0 0
Kent & Wilkins	270 0 0
Hunt	245 0 0

For the Erection of Proposed Parochial Infant School, Balham, and Repairs to Present School, for the Committee. Mr. W. NEWTON, Architect, Bucklersbury.	
Maxwell Brothers	£1,031 0 0
Smith & Son	1,007 0 0
Gerrans	997 0 0
Potterton	954 10 0
Wing & Co.	905 0 0
Dean	847 0 0

For Laundry to be Erected in rear of Ebenezer Terrace, Kennington Park, for Mr. Zierenberg. Mr. BANISTER FLETCHER, Architect.	
Blyton	£917 0 0
Mills	876 0 0
Parker	799 0 0
Towner & Patten	765 0 0
Burman & Sons	749 0 0
Buchan	695 0 0
ANDREWS (accepted)	679 0 0
Aldridge & Jenvey	673 8 0

## LONDON—continued.

For Cottages for the Chelsea Park Dwellings Company. Mr. E. HOOLE, Architect.	
Lathley Bros.	£7,897 0 0
Williams & Son	7,848 0 0
Thorn	7,500 0 0
Mowlem & Co.	7,195 0 0

For College and Hall at Hampstead, for Mr. J. Haysman. Mr. BANISTER FLETCHER, Architect.	
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Groom, Rowland & Co.	£6,634 0 0
Downs	6,540 0 0
Castle	6,490 0 0
Tozer	6,433 10 0
Mansbridge	6,425 0 0
Parker	5,900 0 0
Hayes	5,890 0 0
Couzens & Simmons	5,255 0 0
ALDRIDGE & JENVEY (accepted)	4,989 13 0
Scharien & Williams	4,759 0 0

For Converting three Private Houses into Shops, near Clapham Junction. Mr. THOMAS SPEARING, Surveyor.	
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Steel	£750 0 0
Jones & Edwards	590 0 0
Robinson & Miller	475 0 0
Howard	441 0 0
Cook & Co.	439 0 0
Saunders & Co.	405 0 0
Rudd	400 0 0
Thompson & Co.	393 0 0
Ellis	390 0 0
Warr	375 0 0
Stewart & Co.	369 0 0
Hughes & Davis	336 0 0
Baker	330 0 0
Scharien & Williams	317 10 0
Rand	225 0 0

For Erection of a Large and a Small House in the Royal Road, Kennington, for Mr. C. Zierenberg. Mr. BANISTER FLETCHER, Architect.	
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## Large House.

Mills	£2940 0 0
Towner & Patten	937 0 0
Blyton	890 0 0
Burman & Sons	767 0 0
Aldridge & Jenvey	719 0 0
Andrews	671 0 0
Buchan	665 0 0

## Small House.

Mills	800 0 0
Towner & Patten	798 0 0
Parker	790 0 0
Blyton	799 0 0
Burman & Sons	705 0 0
Aldridge & Jenvey	640 0 0
Andrews	598 0 0
Buchan	594 0 0

For Heating Wesleyan Chapel, King's Lynn, and St. Michael's Schools, Camberwell.	
BACON & CO. (accepted).	

## MATLOCK BRIDGE.

For the Erection of Shed for the Local Board.	
Beck	£50 0 0
Robinson	48 15 0
Crowder & Dunn	42 0 0
Askew	42 0 0

## NOTTINGHAM.

For Erection of Dwarf Walls and Steps in the Forest, and all Work in connection therewith, for the Public Parks Committee. Mr. A. BROWN, Borough Engineer, Nottingham.	
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Scharien & Williams, London	£300 0 0
Vanis, Matlock, Derbyshire	298 0 0
Adams, Nottingham	267 16 0
Attenborough, Nottingham	252 11 0
Hodson & Son, Nottingham	250 0 0
Bell & Son, Nottingham	249 7 0
Smart, Nottingham	217 10 0
SILLS, Nottingham (accepted)	198 0 0

## ORMSKIRK.

For Building a Workhouse School and Premises in Dickinson Street, for the Guardians of Ormskirk Union.	
Roberts, Waterloo	£6,300 0 0
Riding & Son, Ormskirk	6,280 0 0
Harling, Southport	6,030 0 0
Whitehead & Foster, Southport	5,963 16 0
Alty, Hesketh Bank	5,980 0 0
Riding, Ormskirk	5,734 0 0
Brownly, Chorley	5,448 0 0

## ORPINGTON.

For Works of Underpinning at Glentworth House, for Mr. E. G. Allen. Mr. E. P. LOFTUS BROCK, F.S.A., Architect.	
Bailey	£320 5 0
Hocking	275 0 0
Laslett	250 0 0

## PRESTON.

For the Rebuilding of the Roast Beef Inn. Mr. D. GRANT, M.S.A., Architect.	
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## Accepted Tenders.

Basterfield, brickwork.	
Tulles & Son, stonework.	
Baines Bros., joiner-work.	
Park & Co., plumbing, &c.	
Dryden, ironwork.	
Bradshaw, slating.	
Swarbrick, plastering.	
Metcalf & Dilworth, heating.	
All of Preston.	

## QUEENSTOWN (IRELAND).

For Erection of Additional Wards and Dispensary accommodation at the General Hospital. Mr. W. H. HILL, Architect, Cork.	
Ahem, Queenstown	£1,137 0 0
Jones, Dunmauway	1,062 0 0
Kitty, Queenstown	935 0 0
Roberts, Cork	925 0 0
Longfield, Cork	890 0 0
BANY, Middleton (accepted)	645 0 0



**SANDOWN.**

For Construction of a Sea Wall, and other Work, near Sandown Fort, for the Commissioners of the Isle of Wight Highways. Mr. E. HUMPHREYS, General Surveyor of Highways, New Church, Isle of Wight.		
Hall, Portsmouth	£915	15 0
Hayter, Portsmouth	885	0 0
Jenkins, Newport	760	0 0
White, Sandown	720	0 0
Hales, Shanklin	695	0 0
Hayden, Sandown	625	0 0
PRITCHARD, Sandown (accepted)	615	10 0
Barton, Ryde	594	10 0

**SOUTHGATE.**

For the Erection of Twelve Cottages, Hillside Grove, for the United Counties Land Building Society. Mr. G. W. HATCHER, Architect, 35 Finsbury Circus, E.C.		
Newby	£1,852	0 0
Sayer	1,714	16 0
Wheeler	1,638	0 0
Life	1,635	0 0
Tibbets	1,530	0 0
Hobbs & Son	1,435	8 0
Collins	1,404	0 0
Pavey	1,320	0 0
PARKER, Enfield (accepted)	1,200	0 0

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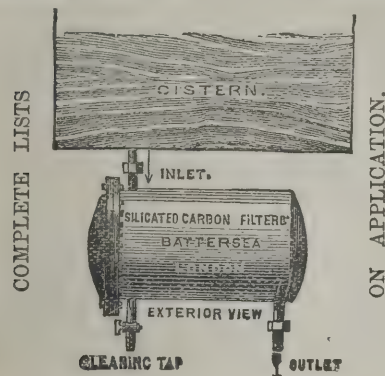
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A. WALTERS, A.R.I.B.A., Architect, 4 Great Queen  
Street, Westminster, S.W. Quantities supplied by  
Mr. W. H. Brayshaw.

BARRY (accepted) £11,266 10 0

**SKIPTON.**

For House for Mr. George Robinson. Mr. F. J. ROBINSON,  
Architect, Derby. Quantities by Mr. J. E. Smith.  
Lewis & Son, Blackburn £3,340 0 0  
Haworth & Roberts, Skipton 3,292 0 0  
Armitage & Hodgson, Leeds 3,218 0 0  
Clegg, Accrington 3,216 0 0  
Abbott & Son, Blackburn 3,200 0 0  
Brassington, Settle 3,109 0 0  
FOSTER, Bingley (accepted) 3,050 0 0

**UPAVON.**

For Building Farmhouse and Stables for Captain Alex-  
ander. Messrs. JOHN HARDING & SON, Architects.  
Bilson, Rushall 1,748 0 0  
Bailey, Keenpence & Sons, Upavon 1,462 0 0  
Mullings, Devizes 1,380 5 0  
Cole, Amesbury 1,365 0 0  
BROWN, Littleton (accepted) 1,220 0 0

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The same can be attached to any design of a Register or  
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"June 10, 1884.

"SIR,—I have much pleasure in testifying to the  
efficiency of your patent Warm-Air Fire Grate. It has  
been very successful, and given every satisfaction where I  
have used it.

"Yours, &c.

"JAMES WEIR, F.R.I.B.A.

"To Mr. Grundy."

"Baptist Chapel, Clapham Common, London. Richard  
Webb, Pastor, 10 Grafton Square.

"February 15, 1884.

"DEAR MR. GRUNDY,—I have pleasure in testifying to the  
excellency and efficiency of your patent Fire-Grate. It is  
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anyone who wish to have their schools or rooms pleasantly  
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From James Garry, Esq., Architect, West Hartlepool,  
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"DEAR SIR,—I have very great pleasure in stating that  
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Dennis, Dalkeith	1,800	0 0
Gauld & McKenzie, Aberdeen	1,781	0 0
Farquharson, Aberdeen	1,770	0 0
Smith, Aberdeen	1,769	0 0
Duguid, Aberdeen	1,757	0 0
Fordyce & Co., Aberdeen	1,750	0 0
Hall	1,740	0 0
J. & J. Ross	1,735	0 0
Milne	1,711	0 0
Smith	1,667	0 0
Grant	1,645	13 0
Gauld	1,600	0 0
PRINGLE & BLESSOR (accepted)	1,467	0 0

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IGGLDEN, Wrotham (accepted).

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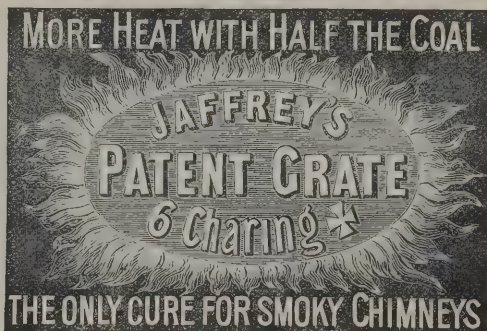
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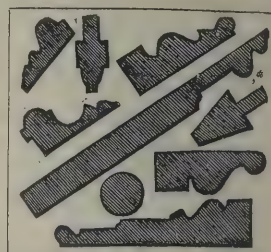
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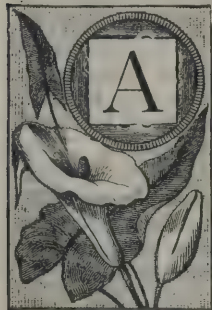
**OFFICE OF "THE ARCHITECT,"**

175 STRAND, LONDON, W.C.



# The Architect.

## THE PROGRESS OF THE INSTITUTE OF ARCHITECTS.



ANOTHER Session of the Royal Institute of British Architects opens next Monday evening, when, there is no doubt, the President will be able to describe, from the point of view appropriate to the chair, a sufficiently prosperous state of affairs. Without professing, or even desiring, to assume a different standpoint, it may possibly be interesting to some of our readers if we survey the prospect independently, taking our facts, of course, from the official records.

The Institute is now just half a century old. Its lists of membership show 412 Fellows or professional full members; 694 Associates or professional members of the second class; 14 Honorary Fellows (the old-fashioned title), and 103 Honorary Associates (the new-fashioned), both of these categories representing amateurs and friends of the profession, many of whom are men of high standing, whether in society, in political life, in art, or in science; 50 Honorary Corresponding Members, eminent foreign architects, belonging to all the principal countries throughout the world; and 3 Honorary Members, differing from the Honorary Fellows and Honorary Associates only in name.

Of the 1,106 professional members, 6 reside in Berkshire, 2 in Buckinghamshire, 4 in Cambridgeshire, 2 in Cheshire, 2 in Cornwall, 5 in Cumberland, 6 in Derbyshire, 10 in Devonshire, 1 in Dorset, 4 in Durham, 3 in Essex, 13 in Gloucestershire, 11 in Hampshire, 3 in Herefordshire, 1 in Hertfordshire, 10 in Kent, 56 in Lancashire (15 Fellows and 17 Associates in Manchester, and 10 Fellows and 2 Associates in Liverpool), 10 in Leicestershire, 4 in Lincolnshire, 8 in Norfolk, 9 in Northamptonshire, 13 in Northumberland, 7 in Nottinghamshire, 4 in Oxfordshire, 3 in Shropshire, 5 in Somerset (Bath), 7 in Staffordshire, 6 in Suffolk, 7 in Surrey, 18 in Sussex, 17 in Warwickshire (in Birmingham chiefly), 2 in Westmoreland, 4 in Wilts, 3 in Worcestershire, 32 in Yorkshire, 703 (240 Fellows and 463 Associates) in London and the neighbourhood, 6 in Ireland, 8 in India, 50 in the Colonies and elsewhere abroad (13 in Australia, 7 at the Cape, 3 in China, 1 in Japan, 10 in New Zealand, 2 in Canada, 2 in Chicago, and 1 in Egypt), 6 in Edinburgh, 20 in Glasgow, 6 in other towns of Scotland, 6 in Cardiff, and 3 elsewhere in Wales.

The patrons of the Institute are the QUEEN and the PRINCE OF WALES; and amongst the Honorary Members of the three (equal) classes there are their Royal Highnesses of EDINBURGH and CONNAUGHT; the Dukes of WESTMINSTER, ABERCORN, and DEVONSHIRE; the Marquis of RIPON; the Earls of DUFFERIN, CARNARVON, DARTMOUTH, POWIS, and WEMYSS; Lords CREWE, HOUGHTON, DE LISLE AND DUDLEY, and SEATON; Count GLEICHEN; SIRS A. H. LAYARD, H. BESSEMER, P. CUNLIFFE-OWEN, J. HANNEN, J. MCGAREL-HOGG, R. WALLACE, W. E. WELBY-GREGORY, W. W. WYNN, and W. R. FARQUHAR; the Deans of St. Paul's, Worcester, and Norwich; the Royal Academicians LEIGHTON, ALMA-TADEMA, ARMITAGE, CALDERON, MARKS, MARSHALL, MILLAIS, POYNTER, WOOLNER, ORCHARDSON, and RICHMOND; the eminent engineers ABERNETHY, BARLOW, BATEMAN, FOWLER, HARTLEY, and HAWKSHAW; with many other equally distinguished persons, such as MESSRS. BERESFORD-HOPE, RUSKIN, GAMBIER-PARRY, W. H. SMITH, CAVENDISH-BENTINCK, NOEL, and the Hon. C. GORE.

Of the thirty-seven eminent architects and architectural writers, English and foreign, whose names constitute the very honourable list of the Royal Gold Medallists, from 1848 till the present time, beginning with COCKERELL, CANINA, and Sir C. BARRY, all are now dead but eleven, namely, Professor DONALDSON (1851), Sir A. H. LAYARD (1868), Mr. FERGUSON (1871), Herr SCHMIDT, of Vienna (1872), Messrs. CHARLES BARRY and WATERHOUSE (1877 and 1878), the Marquis de VOGÜÉ (1879) and Messrs. PEARSON, G. GODWIN,

PENROSE, and BUTTERFIELD since. Amongst "the majority" there are CANINA, VON KLENZE, HITTORFF, STÜLER, LESEUER, VIOLLET-LE-DUC, TEXIER, LEPSIUS, VON FERSTEL, COCKERELL, BARRY, the two SMIRKES, TITE, OWEN JONES, SCOTT, PENNETHORNE, DIGBY WYATT, STREET, and SHARPE.

A list of the "Architectural Bodies in the United Kingdom" may fairly be regarded as a record of the more direct allies of the Institute; and it is satisfactory in this view of the case to find that there are Architectural "Societies" belonging to Glasgow, Berkshire, Exeter, Leeds, Leicester, Lincoln, Liverpool, and Manchester; an "Institute" in Glasgow; a "Royal Institute" in Dublin; and "Associations" (all presumably junior) in London, Edinburgh, Glasgow, Birmingham, Manchester, Newcastle, and Nottingham. In this ample statement it seems, however, a pity to omit the Fabs, Scots, Picts, Nomads, and other minor clubs, which all have their value; the once-promising "Alliance" we suppose has finally gone, years back, to the place where the good alliances go; while "The Society of Architects," which was founded the other day at Exeter Hall, has not probably made good its footing yet as a necessary of professional life.

It is almost superfluous to make the remark that a professional organisation such as is constituted by the general scheme, taken as a whole, which we have above described, is one that ought to be making its mark upon the art and science of architecture, the public character of architects, and the building administration of the country at large and its dependencies. The growth of the Institute during the last few years has been thus rapid, because the growth of the profession of which it is the supreme Guild has been still more so. The late Sir W. TITE used to say that in his early days (shortly after the close of the great French wars) he could have counted all the architects of recognised standing in London, if not indeed in England, upon his fingers. Compare this with the present state of things. There are now living about 80 Fellows of the Institute in London alone, who had attained to the high rank of past members of the Council before the questionable reforms of 1877 which practically prevented the list from being continued—to the great injury of rising men—by making the Council a sort of permanent body for the benefit of a few. The seven years since that time would doubtless have added at least 30 more of equal merit; and it is not too much to say that these 110, as architects of recognised status now at work in the metropolis alone, might be doubled in number, if not trebled, before anything like a limit could be assigned to the class of London practitioners who may fairly be designated architects of satisfactory skill and experience. Then, when we come to add the provincial men, although it is not easy to say how many of these there are by name, it is not so difficult to proceed upon the fact that, amongst the Fellows of the Institute alone, the provincials, in spite of all impediments to membership, tell up to about two-thirds the number of the metropolitans. We may safely guess, therefore, that there cannot be fewer in all than four or five hundred practising architects in the United Kingdom to correspond with the long or short dozen whom Sir W. TITE recognised as persons of a little importance sixty years ago.

To take another test, let us look at the number of designs of merit which are nowadays delivered in a favourite competition, and compare with them the number which, sixty years ago, would have displayed equal pretensions. Consider, again, the increasing multitude of young men who are coming forward to serve the public in a condition of culture as regards design which is astonishing to their elders. What is to become of them is a question which is not before us; we have not hesitated on former occasions to indicate more than one line of collateral practice in which they may probably advance the honour of England quite as well as in purely architectural business; but, at any rate, every consideration of this kind only magnifies the more the importance which professional architecture, in its three branches of art, science, and administration, is steadily acquiring, and the corresponding importance, therefore, which attaches to the public body which is the supreme authorised Guild of British Architects.

The question which arises in most minds upon a contemplation of all this is one that is not easily answered:—How is that dignity to be maintained which is becoming more and more essential to a Guild of such increasing importance? Obviously it is the dignity of the professional members of such a body which alone is here concerned; for the auxiliary aid of outside sympathisers, however cordially it may be bestowed,



is at the best a superficial and factitious adornment, under which the thews and sinews of the organic reality must be either alive or dead.

There are two elements of growth which here come into view; they may be roughly designated Quantity and Quality. That they cannot very well progress together is easily seen; the increase of numbers necessarily lowers the average of intellectual value, whilst the improvement of the standard of merit, just as certainly, must work by means of exclusiveness, to the inevitable sacrifice of the advantages which are to be derived from numerical extension. It is natural, therefore, that in these days of ours, when in all things there is a certain conservatism in favour of quality of one sort or another, opposed to a certain liberalism which takes upon trust the maxim that in quantity, breadth, freedom, and so on, the greatest good of the greatest number, we have Heaven's first law of public prosperity, there should be in the case before us a little of the same mutual suspicion between quantity and quality that there is everywhere else. The list of membership in the Institute has been, indeed, so largely and so rapidly increased of late years that it would be idle to deny the deterioration of professional status which in many cases is discernible as the direct result. On the other hand, the fact that the increase of number, taken upon the lines now accepted, has a good deal farther to go in London, and farther still in the provinces, seems reasonably enough to induce the Management to press forward with continued earnestness in the direction of extension. The recently established examination for Associates is a reaction in favour of quality, but it as yet only on its trial; there are enthusiasts who would examine Fellows also; possibly there may be some who would examine Honorary Members, and "plough" a Duke. Time alone can show the effect of such measures as an interruption of natural development. For our own part we are not sure but that the general opinion of the day would prescribe for such an institution the acquisition of unlimited quantity first as a necessity, and the earnest cultivation of quality afterwards as a luxury.

#### MR. ERNEST GEORGE'S EXHIBITION.

IN his article on "Etchings on the Mosel" which appeared in *The Architect* eleven years ago, Mr. RUSKIN described the characteristics of Mr. ERNEST GEORGE'S style of draughtsmanship in words which are no less applicable to the collection of water-colours that may now be seen in New Bond Street. "I call Mr. GEORGE'S work precious," Mr. RUSKIN said, "chiefly because it indicates an intense perception of points of character in architecture, and a sincere enjoyment of them for their own sake. His drawings are not accumulative of material for future use; still less are they vain exhibitions of his own skill. He draws the scene in all its true relations, because it delights him, and he perceives what is permanently and altogether characteristic in it. As opposed to such frank and joyful work, most modern architectural drawings are mere diagrams or exercise. I call them precious, in the second place, because they show very great powers of true composition. All their subjects are made delightful more by skill of arrangement than by any dexterities of execution. . . . Mr. GEORGE'S work is precious, lastly, in its fine sense of serene light and shade as opposed to the coruscations and horrors of common modern attempts in that direction." An intelligent visitor to the gallery of the Fine Arts Society can hardly fail to recognise the truth of Mr. RUSKIN'S criticism, although he might not be able to express his judgment with so much subtlety.

It is not going too far to say that very few exhibitions are more deserving of attentive study from architects than this one of Mr. GEORGE'S. In the first place the subjects are all interesting. There are two hundred and eighty-six drawings, which represent some of the most picturesque buildings in France, Italy, Germany, Switzerland, Spain, Belgium, and Holland. We have also a few from Scotland. The buildings selected are not unknown even to untravelled students, but they seem to obtain a fresh charm in Mr. GEORGE'S representations. Sometimes they are taken from new points of view, sometimes we are made to see them under conditions of light and shade which may not be apparent to all eyes. But with all the freshness of treatment, there is no straining after effect. Pictures of every kind are generally produced with a view to impressing a spectator. Mr. GEORGE'S sketches appear

to have been made for the satisfaction of the artist. We have heard that they were lying in portfolios and drawers, some being almost forgotten, when it was suggested that they might with advantage be shown in public. The style alone indicates that the author was free from thoughts of purchasers and critics.

In Mr. RUSKIN'S eyes it would seem to be a virtue when an architect's drawings "are not accumulative of material for future use." But in spite of our respect for the critic, we doubt his competency to determine that end. An architect's sketches are aids to his memory, and no one but himself can tell to what extent they will be useful. Critics who test Mr. GEORGE'S work by a comparison with photographs or laboured drawings, overlook the primary purpose of the sketches. They are not so much records of detail as of the impressions which buildings make on a mind at a time when it is most susceptible, and they would be successful in proportion to their power to recall those impressions. The public may admire the sketches, but they can never affect a stranger in the same way as they do the author. M. ZOLA, in writing of pictures, says that "une œuvre d'art est un coin de la création vu à travers un tempérament." Regarded in this way, a sketch bears some analogy to a lyric in expressing the feeling that was predominant at some particular time; and the success of Mr. GEORGE'S drawings may, consequently, be attributed not entirely to his skill as a draughtsman. It is plain that the buildings which he has drawn are not the most remarkable which he has seen in his travels but those only which gave him most delight. Mr. GEORGE could hardly have done so well if he visited the places in fulfilment of a commission from publishers or dealers. His drawings are holiday work, hence, as Mr. PHENÉ SPIERS says (and few men are better qualified to give an opinion on sketching), "in this fact possibly lies the secret of their freshness and brilliance, which seems to partake of the overflowing spirits, the joyous delight of a boy fresh from school." It is owing to the same cause that we find so much unity of character in each of the sketches. There is nothing to indicate that the author was tired before his work was completed, and that a part had to be passed over. Every drawing appears to have been struck off without any variation of mood, and as if the author's aim was to express his first impression.

The quality that Mr. GEORGE appears to admire most is what is called picturesqueness, but which is so difficult to define that Sir JOSHUA REYNOLDS could only say it was something accidental. He has none of those wonderfully regular buildings which appear to be as much determined by rule as an apothecary's prescription. In Paris he prefers the Church of St.-Germain l'Auxerrois to the stately Louvre which confronts it, and in Edinburgh the New Town is neglected for the Canongate. We are afraid that Mr. GEORGE is not a stickler for purity of style when he is on a sketching tour, and it is evident he is attracted by back streets and out-of-the-way places. So long as a subject is attractive he is indifferent as to whether it forms one of the lions of the Grand Tours which are now organised by Messrs. Cook, is entered in "Murray," or has been approved by PROUT. Owing to the general excellence of the collection it is difficult to single out drawings for notice. The château and bridge at Amboise, the views in Dinan, Dieppe, Orleans and St. Malo, the whole of the Spanish and Venetian sketches, should not be passed over, however short may be the time available for a visit to the gallery. There is not one of the drawings which will not repay study, and it is satisfactory to find that the number sold is a good test of the appreciation of the public. It should be remembered that in this country buildings are less often selected for representation than they deserve. Few of our painters have been at pains to study architecture, and they are satisfied when they possess sufficient skill to depict a part of a building in a background. It is otherwise in France and Germany. An ordinary English gallery is therefore very often deficient in one important department of art, but happily drawings like those by Mr. GEORGE testify that there is skill in this country to fill the void.

**The New Railway Station at Bruges**, so long an eyesore to all tourists passing through that city, is at last to be completed. The walls that closed it in at either end have been pulled down, owing to their foundations having sunk, and after the station has been lengthened their place will be taken by some well designed iron trellis-work, glazed.



## COWL TESTING.

ABOUT six years ago the Sanitary Institute of Great Britain appointed a committee to test the comparative merits of the different ventilating cowls in the market. The labours of the members do not appear to have been productive. As far as we can understand, the net result is that the committee are able to say that they now possess trustworthy anemometers, and are at last in a position to proceed with the tests. If six years have been needed merely to ascertain the correctness of the instruments to be used, we may ask how long a period will be required to complete the actual experiments? Should corresponding energy be exhibited, we may fix the time at about seventy-two years. There is no exaggeration in assuming so long a term. We have only to allow, say a month for testing the instruments, which is a reasonable time, and twelve months to test the ventilators, which is also a reasonable allowance, for no tests could lay claim to be considered either complete or conclusive unless made under all the varying conditions of the four seasons of the year. It is well known that one ventilator will act better under certain conditions than another and *vice versa*.

But, after all, what is the value of the investigation? Is it anything more than that a number of gentlemen (some being of the amateurish kind) have got a notion that they will materially aid the cause of sanitary science, and confer a benefit upon the cowl-using section of the public, if they can demonstrate, to their own satisfaction, that some tradesman or other sells a better cowl than his rivals? If the conclusions arrived at after so vast an expenditure of time could be taken seriously by the public, it would probably involve a great loss to the unlucky wights whose cowls had failed to satisfy the committee. As a consequence some dozens of energetic and able men, who are manufacturers of cowls, and who at present are doing more real service to the cause of sanitary science than could be attained by the pottering of amateurs in the course of a century, would be driven out of the field.

There is, however, not much danger of so undesirable an event. The public have already shown by their indifference to the "Kew experiments" that they know the difference between perfect and partial testing, and are aware of the difficulty which attends all attempts to solve the problem. Let us for a moment see how much is involved in the task which a self-appointed committee have undertaken so lightly. Presuming that the tests were intended to fulfil the object in view, it would be absolutely necessary that they should extend over a period of at least twelve months, in order that the cowls might be tried under all conditions of the weather. It is well known to those acquainted with the subject that there are what may be called fair-weather cowls. It would be obviously unfair to test a cowl which is at its best in summer and autumn, but is less efficient in cold and stormy weather, against one which was devised to contend with the most trying atmospheric conditions. To be equitable, a test should be conducted throughout an entire year. But how can we expect a body of gentlemen to devote so long a time, on purely philanthropic grounds, to make the continuous, careful, and elaborate tests and calculations which would be necessary to insure correctness in the final results, and without which their conclusions would be of no practical value? It is also well known that position has much to do with the efficiency of a cowl. It has been often found that a ventilator which acted indifferently in one situation, when removed to another worked well; whilst another ventilator which was found to fail in many situations, when applied to the first building answered admirably, the existing conditions evidently being favourable for its action. The same thing is found in applying cowls to smoky chimneys. What cures one chimney will not cure another, the conditions necessary for success being either absent or present, as the case may be. It is a very common experience among builders that, where several cowls have been tried on a chimney without success, a cowl which elsewhere was found to be worthless exactly meets the requirements of the case. It is just the same with ventilating cowls. It follows that, if adequate tests are applied to cowls, it would be necessary in the first instance to ascertain in what situations they act best or otherwise, and test each of them in those places. This would entail an enormous amount of labour and expense, but it would be absolutely necessary if the tests were to be considered as fair and binding. If cowls were all tried in one situation only, the cowl for which that situation happens to be

most favourable will of course show the best results, although under ordinary conditions it might be one of the worst.

Then the construction of a cowl has a great deal to do with the draught in the shaft when tested. Thus, for instance, a cowl which is pretty open offers less obstruction to any pressure of air applied to the bottom of the shaft. When there is but little wind outside, we may find a very fair draught in the shaft. In the case of an open pipe tried at Kew, where, owing to the peculiar arrangements of the inlet, a strong pressure was applied to the bottom of the pipe, and there being no obstruction on the top at all, the air of course passed up with considerable velocity. But it was owing to no arrangement or action of the wind upon the top of the pipe that the current was created. It was merely the pressure underneath which, when removed, renders the open pipe nothing more nor less than what the open pipe always was and is found to be when applied practically for ventilation—that is, a channel through which the cold air pours down upon the heads of those who are unfortunate enough to be underneath. Cowls less open, and therefore not so susceptible to internal pressure, may be found to act considerably better when the wind is blowing than those which seemingly act well in calm weather, but when tested in blowy weather do not act so well. There is another point of extreme importance. All tests should be open to the inspection of the public and the patentees of the cowls, so that they may be enabled to judge of the pressure as well as of the correctness of the tests. When private interests are at stake secret transactions are always liable to suspicion. Where everything is fair and above board there should be no fearing or shirking public examinations. The Kew experiments, besides doing an immense amount of harm at the time to the cause of sanitary science, by bringing it into ridicule, have so shaken the confidence of the public with respect to the value of testing, that, even if it were possible for any future experiments of the kind to be correct, they would gain no credence. The world is not likely to forget the verdict of the *Times* on the recreations of the Kew philosophers:—"The method of testing was incorrect, and therefore the tests are valueless. . . . Neither in the case of either of the cowls nor the tubes was their true value as extractors ascertained." As the days of the revolving ventilators are practically numbered, it would only be a waste of time, and do an injury to the cause, if any were included in the tests. Even if some may be found to act very well under favourable conditions, they are in general untrustworthy, as they soon wear down, are always getting out of order, and acting the wrong way to that intended; make a disagreeable noise, and altogether become objectionable. They are, besides, not susceptible to ornamental treatment, like fixed ventilators, without materially interfering with their action. No practical man would ever think of placing a revolving cowl in the first rank of ventilators, as even an inferior form of fixed ventilator would be of more practical value in the long run.

If any of the gentlemen who were concerned with the abortive experiments at Kew, which have excited so much ridicule, are engaged in the proposed experiments, we may anticipate a similar fiasco. The position of the members should be above suspicion, and it would, for instance, be unfair to allow a sanitary engineer and patentee to act as a judge on the appliances of a rival, whose theories on the subject were at total variance with his own. Another argument against any of those who formed the first testing committee acting on the present would be that these gentlemen, having arrived at certain conclusions, have stoutly maintained their correctness, and have persistently adhered to them. It is only natural that they should conduct the proposed tests with preconceived and fixed notions and a strong bias. The scientific incapacity which was displayed during the first tests is not a recommendation for the reappointment of the committee. Their conclusions and decision having been pronounced by the press, the public, and the Sanitary Institute to be incorrect and valueless, and that further tests were therefore necessary, it would certainly be the height of absurdity to constitute any of the members of that committee (who may now be said to be on their trial) as judges on their own case. It is also to be hoped that the tests now said to be going on are not being conducted again at Kew, as a more unsuitable building for the purpose than the one used there could not be found. It is an ordinary wooden shed, surrounded on three sides with trees, which create a "swirl" and an eddy all round the building. The situation alone of this shed would be sufficient to render any tests made in it valueless.



There are at the present time some hundreds of ventilating cowls in the market, of which about a score are prominently before the public. It will, of course, be necessary to test every one of these cowls if the experiments are to be accepted as conclusive. If only a few ventilators are subjected to experiments, the tests will fail in proving anything more than that one of say half a dozen cowls was better than the other five, but would not prove that either it or any of the five were better than the infinitely larger number of cowls that were not tested. It would seem from the proposed arrangements that the committee were of opinion that there was an end to invention. After all the labour and expenditure of valuable time the conclusions may be set aside by the introduction into the market of new and improved ventilators, all claiming to be better than the crowned cowl of the committee. Who is to prove that they are not so, inasmuch as they were not amongst those tested? Are the philosophers to get up a fresh series to settle the pretensions of the new claimants, and are they willing to renew those experiments as often as fresh cowls are brought out, say at the rate of two or three every week, as is the case at the present time? Do they suppose also that the defeated cowl-makers would not immediately set to work and make alterations in their cowls which would render the tests made utterly useless and futile, as they could and would not apply to the improvements? These are questions which may not have hitherto presented themselves to the friends of the experimentalists.

### THE ARCHITECTURAL ASSOCIATION.

THE first ordinary sessional meeting of the Association was held on Friday evening, the 24th ult., Mr. Cole A. Adams, president, in the chair.

MR. H. D. APPLETON, hon. secretary, announced that the President had been invited by the Committee of the American International Exhibition to be held in London in 1886, to join the Committee of Welcome.

The various reports of the classes and the balance-sheet for the past session were then submitted and approved of.

#### The President's Address.

THE PRESIDENT then delivered the following address:—Once more devolves upon me the duty of delivering the opening address of a new session, and I cannot but feel sensible of the great responsibilities that this implies. What I have to say must have some little influence for good or evil in the professional career which has opened to many of you, and the sense of this must needs weigh somewhat heavily upon a man placed as I am, especially if he bears in mind that this annual opening address is but one part of his work, and that through the whole session his efforts to fulfil the duties of president must be unceasing and untiring. In conferring this office—the highest in your power to bestow—you have a perfect right to demand the utmost that it is in the power of him whom you have selected to give in return. That you have generously appreciated my efforts during the past session to serve you to the best of my ability, I thankfully believe, from the fact that I again hold the important office of president. Let me here publicly express my gratitude to you for this mark of your esteem, and assure you how highly it is valued, and that what more I can do now and in the future shall be done, with what ability, health, and strength I may have. So much, personally; I could not leave it unsaid before passing to more important things.

Those who were present on the corresponding night to this last session will perhaps remember that we considered the various statistics furnished us by the Brown Book, which, *en passant*, I rejoice to see, has returned to its true colour this session. These statistics were not so encouraging as could have been wished, nor are those now before you this new year. It will be well as briefly as possible to consider the facts just presented to us. In the elementary class of design there is a falling off of sixty-eight attendances and seventy designs submitted; on the average, eight less attendances, nine less designs submitted. The class of design is, however, encouraging—forty-four more attendances, fifty-four more designs submitted; on the average, five more attendances, seven more designs submitted. Again, in the colour decoration class, progress has been made. Last session no statistics were forthcoming. Comparing this one with that of 1881–82, we find thirteen more attendances, seven more sketches; on the average, three more attendances, two more sketches. Turning to the class for study of planning and specification writing, seventeen more attendances, eleven more sets sent in; on the average, three more attendances, two more sets sent in. Class of construction and practice, thirty-four less attendances, eighty-one less papers; on the average five less attendances, ten less papers. Advanced class of construction, seven less attendances; but on the average two more than the previous session. The surveying class shows a

decrease of five members below the two previous sessions. The lectures in connection with classes of design gain by two attendances, those for construction by twelve, on the average one. The library report shows a falling off of nine in the number of readers. You will see, therefore, that though the annual report is right in pointing to "some advancement in the work of the Architectural Association, and some improvements in those respects, which were referred to as being unsatisfactory, especially in the case of the colour class," still it is not so great as we all hoped and expected, especially if you consider the large increase of members. The falling off in the elementary class of design is very noticeable, but some consolation may be gathered from the encouraging increase in the class of design, and Mr. Stannus, the president of this class last session, must be congratulated on this fact. The colour decoration class has, I rejoice to see, shown fresh signs of life and vigour. There is also an encouraging improvement in the class for study of planning and specification writing.

Then we are met face to face with a very serious falling away in the Class of Construction and Practice, and that for the Advanced Class of Construction is not much better. Referring to the latter, the report of the secretaries, points out that six out of the eight meetings advertised were held, four out of seven papers promised were read, and these were by members who contributed the previous session; but it should be noted that the average of attendances was higher. Lastly, the reports of the teacher of the surveying class and the librarian are not such as could be wished. Taking all the above facts into consideration, I think it will be admitted that the appointment of a special committee "to inquire into and report upon the present system of education as carried on in the various classes and lectures of the Architectural Association, with the object of rendering them, if possible, more efficient, and in other ways considering how the quality of the instruction and work done in the Architectural Association might be raised," has not been undertaken too soon, and that we must one and all devote our energies to finding some means for altering the state of things by taking a new departure. This special committee has not been idle. Their first business consisted in sending out a series of questions for the purpose of eliciting opinions, facts, and suggestions from those considered best acquainted with the working of the Association, and from others competent to advise. The result of this has been a mass of most valuable information, which has been duly tabulated by the honorary secretary of the committee, Mr. Frederick E. Eales, in a very thorough and comprehensive manner. This information has been, so to speak, boiled down, and the essence drafted into a report, which, early this session, will be brought before the special committee, and when passed, laid before the general committee, to undergo further revision. Then the whole result of these deliberations will be presented to you. The gist of the questions issued in the first instance I will briefly summarise, in the hope and expectation that those members who, from inadvertence, were not applied to, and others who have the cause of solid advancement at heart, may be induced to lend their help and forward their views at the very earliest day possible to Mr. Eales, who will, I feel sure, welcome any contributions; despite the further encroachment it may make upon a busy life. Briefly, then, the questions run thus—and I shall restrict my summary to those upon which we most need information, and in any answers you may favour us with, kindly make them in the order in which I put them. The numbers here given agree with the printed paper to which your attention was called. (1) Is the system of education the best one? In what way do you think it can be improved? (2) What are your views of the quality and amount of work done in the classes with which you are best acquainted? (3) What are the points of failure, causes, and means of obviating them? (4) Would it be advisable to reduce the amount of work set down for each class meeting, with a view of making it more thorough? (5) Would you advise any test for admittance to the advanced classes? (6) Is it desirable to limit the period of members attending the elementary classes? (7) How can the advantages of the Association be extended to country members? And, lastly, in No. 9 we asked, "In what other ways do you consider the usefulness of the Association might be extended?"

That last question opens up a wide field, and, like the postscript to a letter, is, perhaps, as important as any of the previous questions. I hope that all those who are in this room to-night, and who feel that they can do something to make our machinery turn out more work and better, will answer to this call, as well as those who may chance to read my address in the professional journals. It is not out of place here to say how very much we are indebted to the editors of these papers for the large amount of space they give us; the compliment is a very high one, and I feel sure I may, as your President, convey our best thanks to these gentlemen for the courtesy extended to us—a proof of the interest felt in our proceedings, and their continued record of them goes to prove that our doings outside these walls are carefully watched by our professional brethren, and an interest taken in our welfare. Were it otherwise, we should not see at meeting after meeting the faces of the reporters now so familiar and so welcome to us. We



owe the press this recognition of their valuable and useful services.

With the exception of the advanced class of construction and practice, and the class for the study of planning and specification writing, all the other classes which meet in this building have this rule, "Each member *must* contribute to the work of the class whenever he attends." A glance at the statistics given in the Brown Book will prove that this rule is not enforced. The attendances during past sessions have largely exceeded the work submitted in the various classes. It would probably be very difficult indeed to enforce a strict observance of this very salutary regulation; the frequent and constant disregard of it is, however, very discouraging, and shows how many drones we have in the hive. What remedies can be devised to meet this difficulty will doubtless form an important subject for discussion in the special committee. The real solution of the difficulty must, after all, remain with the members themselves, and I hope when the next Brown Book is issued we shall see some improvement. To contribute work will materially assist you; do not fear criticism, you may not succeed so well as you could wish, but you will certainly be the gainers by entering boldly into the contest.

Last session a sub-committee was appointed to consider whether the time had not arrived when the Architectural Association should publish the lectures delivered in this room. No action has as yet been taken, although some statistics of probable cost have been collected together. The expense of such an undertaking could not fall, I think, upon the funds of the Association, nor could members expect to be furnished gratis with copies, considering the small annual subscription they now pay. Whether the scheme ever takes definite shape must depend upon your own wish. If a sufficient number of subscribers could be guaranteed the experiment might be made, and I think some index of the feeling of our community might be ascertained if members would be good enough in the course of a week or two to send a post-card to the honorary secretary of the committee, Mr. H. W. Pratt, one of our vice-presidents, stating whether or no you are in favour of the work being undertaken. The cost, if a fair number of subscribers could be got together, would not be very large, and no one will be committed to any subscription who is good enough to comply with this request. This proposition of publishing the lectures is not a new one; but, as we are considering a revision of our work generally, the present seems a fitting time to come to some decision upon this point. One strong argument against the necessity for publishing the lectures is that they are so well reported for nothing in the professional journals. This is so, and most highly should we value this boon; but then, on the other hand, no journal can be expected to publish our papers *in extenso* except when they have less claims upon their space, and, year by year, demands upon that are made from all quarters. Again, it is next to impossible to edit the productions with the exactness which a careful author would wish. When a man sees his composition in print it generally reads differently to him, and needs careful revision and some re-casting. Though the journals give all the time they can to the authors, it frequently happens that the printer's boy has instructions to wait while the proof is corrected, and so it cannot be done with that thoroughness which such work requires, and only practised writers can hurriedly bring their thoughts to bear on the work before them. Another drawback is that the papers are bound up with the other parts of the journal, and are not nearly so handy for reference as they would be bound up separately. It is also urged against the proposed scheme that we should find a difficulty in getting the younger men to contribute papers, if they had to face the ordeal of this special publishing. I think that objection may be dismissed. I believe it would have a contrary effect, and that we should procure even better and more carefully thought-out papers, and that the honour of reading one would be more highly coveted. The publicity which the press gives to our meetings is surely a more trying ordeal than the one proposed. Again, it is urged that the discussion took place among us as students, and that the ideas evolved from a discussion are hardly worth perpetuating. To this it may be replied, that the committee appointed for the editing and publishing of the papers would in the natural course of things have discretionary powers. I have dealt at some length with this question, because I think it is an important one; and before leaving it I will again beg of you to let the committee know what your own views are upon the matter, for the decision rests solely with the members.

The judges of the Essay Prize recorded with satisfaction the success achieved by the recipient of it last Friday week; but the committee of prizes felt themselves compelled to notice how very little interest is felt in essay-writing, and they go the length of suggesting that it should no longer be advertised in the Brown Book. I hope this will not become necessary. I think the fact that students do not care to compete in literary work is a sad and serious one. Let us for a few minutes consider the matter. We claim to be members of a learned profession, and I remember hearing the great amateur architect of St. Albans Abbey say "in another place" that we are such. Whether that gentleman was indulging in a pleasantry or was in sober earnest I cannot guarantee, but I have no reason to doubt his meaning it.

The profession *is* a learned one, and has on its roll of past and present members men highly distinguished in science and art, and in those necessary accomplishments which go to make up an educated gentleman. It should be our desire to fit ourselves for any position in our profession and in society; but to do this we must possess those literary attainments which a learned profession and society demand from those who seek to take up a position in it. To write a good essay is not within the ability of many, but to endeavour to do so is in the power of most. To write an essay at all demands an acquaintance with the subject set down for competition, and this necessitates looking up facts and perusing works on the subject. The necessity for a logical order, careful composition, and neatness of expression and dictum, affords most valuable discipline and teaching, and the result of the sacrifice of time to this pursuit cannot but result in good to the student. One satisfaction will be, that with practice he will find his thoughts will run more naturally to tongue and paper, and assist him largely in addressing meetings, committees, or public bodies, or in writing reports. Again, the pursuit of references must needs open up studies which will be of use in ways little dreamed of at the time, and probably foster a love for reading and research which cannot fail to achieve as a result a cultured mind, which, I take it, is the *raison d'être* of the essay prize. I fancy when the profession was not so crowded as it is at present, and when good draughtsmanship was not so much thought of and practised as it is now, that *bonâ fide* architects had, on the whole, a better right to the distinction of being called "learned." Previously to the Gothic revival, men devoted more time to the literature of the art, and what they learned was more thorough. With the Gothic revival came that improvement in draughtsmanship which has been so marked of late years; but I fear in too many instances the love of this charming occupation has shut out of sight the need for literary studies, and the fascination of being a good sketcher in perspective has been detrimental to that more solid good to the student which comes from measured drawings. It needs no very high order of intellect to be a clever draughtsman, and a too close devotion to this pursuit must debar the student from storing his mind with that knowledge of the literary and scientific part of his profession, without which he cannot hope to hold his own with *savants*, or take that place in his profession, and in society, which should be his lawful ambition. Every year education makes strides, and we can only maintain our position in the world by showing we are worthy to do so; to neglect all efforts at culture, and the scientific side of our work, is simply suicidal. I do not think I have taken an exaggerated view of this question. Believing it to be of the utmost importance, I have made these few remarks; test the soundness of them for yourselves, and take council with those men who are best qualified to direct your studies. Give a little less time to draughtsmanship and making pretty sketches, a little more time to mastering the literature of your profession; go beyond this as opportunity presents, and study literature in other branches, and pleasure and profit will be the result.

In considering how the teaching in our society may be made increasingly useful to the members, the advisability of establishing a class for instruction in taking out quantities will certainly have to be carefully considered. The proposition is no new one; it has been before discussed, but a feeling seems to exist among some members that it is no part of an architect's training. I confess I take an entirely different view, and consider it a very important and useful part. A knowledge of how to take out quantities implies an acquaintance with construction, and those details of the different trades, together with a knowledge of materials, their strength and suitability for the various purposes for which they are required. The care with which quantities must be taken out brings to light and sight what had otherwise escaped notice, and has a distinct tendency to foster that spirit of carefulness and forethought in making drawings, which cannot fail in the long run to be beneficial to the pockets of the client. The value of this knowledge in preparing estimates can hardly be exaggerated; and were this necessary part of our profession more generally known, we should not see those great discrepancies which a glance at the tenders in the professional journals weekly disclose. I am not advocating whether architects should take out their own quantities or not; every man must settle that point for himself. I do not think any rule can be laid down, but it is hardly necessary to point out that, if the requisite knowledge is cultivated and gained, a young practitioner may legitimately swell a small income; and if it is his lot to practise in the provinces, the necessity for this accomplishment will soon present itself. We have in our ranks many gentlemen who practise as quantity surveyors, and I am sanguine that, if a class is started, we should not lack teachers, and I believe it would soon become one of the most popular classes of the Association. If a strongly-supported wish exists that the experiment should be made, I feel sure that the committee, as your representatives, will give the matter the most careful consideration. This, as well as other work in the Association, lies in your own hands mainly, and it is for you to say clearly what your wishes are, so that we may be guided in our judgment by the expression of opinion that is presented to us.

We hear a great deal talked about sanitary science, and I



fear the profession is a little weary of the subject; but it is one we cannot afford to ignore, and it would be a most foolish thing to do so. At the risk of wearying you, and repeating what I have said about this matter on other occasions, I must say a few more words on the subject. Every one almost now who takes a house or intends building one asks the question, "How about the drains?" and when we consider that on whether these are right or wrong depends the health or sickness of the household, the importance of the subject from every point of view is brought before one, and unless, as the professional adviser, an architect can advise and carry out sanitary work in the latest and most approved way, he stands a very fair chance of finding that his income will suffer very materially. So, putting the matter on those selfish grounds alone, the value of the requisite knowledge will be conceded by most. But let us consider it on the highest grounds, that upon our skill depend the lives and well-being to an almost incalculable extent of the inmates of the houses with which we are concerned. Suppose a young architect, in the face of the information now at his disposal, were to disregard it, and leave all the sanitary arrangements of his building to chance, and that shortly after it was occupied illness should occur, perhaps a death, and that inquiry—which in these days would assuredly follow, for doctors are fully alive to the evils resulting from defective sanitary arrangements—should bring to light that these were so badly constructed and arranged in the building we are considering, that the cause of the illness and death could be traced directly to this want of care and skill on the part of the young architect. This is not an unlikely case; it has occurred over and over again, and is too often solely due to culpable neglect. Bring home to your minds the sorrow this must cause in the household, and resolve that the charge of neglect in this respect shall never be laid at your door. In times past no one recognised the full extent of the danger involved in the water-carrying system, until medical science turned its bull's-eye lantern into the dark places of the system, and disclosed what frightful evils might lie hidden in our houses, ruining life, health, and happiness. The principles of house sanitation are now well known, and can be learned with patience and practice. To neglect this branch of the profession is the most foolish policy, and can only end in discomfiture.

Every student should, if he has not done so already, and if it lie in his power, make a point of visiting the sanitary and insaniary houses at the International Health Exhibition, and, purchasing the little pamphlet sold there, go carefully through the two houses and study the arrangements. The scheme of presenting the subject to the eyes of the public in this form was an exceedingly happy one and full of teaching; one of the results will be that the public will look more closely into these matters, an additional reason, if one were needed, that we should be before them, and show by our knowledge of the subject that we recognise its importance, and are prepared to meet the demon of sewer air "armed at all points." If architects are unwise enough to neglect this part of their work, we may look for a large extension of outside specialists who will take from us what legitimately belongs to the profession. We can put a stop to this, by conclusively showing that an architect acquainted with all the details, comforts, and construction of a house is the man best qualified to carry out its sanitary arrangements. Bear in mind, also, that a man conversant with modern sanitary science possesses an investment which has a valuable pecuniary interest attached to it, and his employment upon such work may lead to his securing more of another kind, perhaps more congenial to his tastes; at all events, in these days of competition in every walk of life it is hardly prudent to let any chances slip through our fingers. The study and pursuit of this science is not dull or uninteresting; go into it with thoroughness, and I believe you will find that this is true.

In the criticisms which followed my address last year, some of the speakers considered that I had drawn such a picture of what was necessary for an architect to know, that it left the student no time for recreation. I should be sorry for anyone to think that I was in favour of the student bidding adieu to recreation when he embraced the architectural profession. Experience abundantly shows that the cultivation of the physical with the mental, produces the best "all round" man, and the pursuit of healthy exercises in moderation is a wise course to adopt. A strong and healthy man, with a well cultivated mind, can more readily enjoy and digest knowledge than a weak and unhealthy one, and life is too short for man to be robbed of that precious relaxation from work which healthy natures rejoice in. In setting before a student a high ideal of what his career should be, better service is done him than by throwing dust in his eyes and telling him that he need not trouble himself to excel in the many branches which constitute our profession. He who would hit the target must aim high, and allow for his shot falling lower. An architect's life must be one in which he is always a student, always learning something, if he will but keep his eyes and ears open to receive knowledge. It is not for one moment to be expected, or in any way desired, that a student should set to work with the idea that in a year or so he can master the various branches of his profession; better that he should take up one or more subjects at a time and master those before proceeding to others. It must take more than the usual three years of articles before a student can emerge into the full-blown archi-

tect, and he is wise who, when his articles have expired, still continues to submit to the yoke, and goes on perfecting the knowledge of his work. I have not put forward anything that is impossible or impracticable, nothing that cannot be accomplished with patience and perseverance, and still leave time for that exercise of the body so necessary to preserve a healthy mind.

What is the future of the Architectural Association? It was founded several years ago for the same aims that now exist; but I think if we were carefully to analyse the work done, with the number of members that belonged to it in its earlier years, it would be found that the proportion was a larger one than it is at present. We now number all but one thousand members, and, financially, our balance-sheet shows that the amount to our credit is considerable. But is the proportion of workers, and the amount and quality of the work done, in favourable comparison with past years? We are looked upon as a successful institution, and that very fact carries with it a warning and a danger. Any community in its younger days is simpler in its tastes and pursuits than it is as it approaches maturity, and little by little, if affluence falls to its lot, luxury creeps in, unless the rulers are wise and resist its insidious poison. It is the fashion now in the profession to belong to the Architectural Association—and, in a way, a very good fashion too—but I think I may say, without being accused of sounding the alarm unnecessarily, that there is at the present time a want of that early vigour and earnestness which was, as far as I can learn and judge, present in this body in the years of its infancy. The proportion of workers to the number of members last session I calculated was just about one-fifth; that alone is not a very healthy sign, even making fair deductions for those members who have passed through the classes, and others in practice who still, happily, keep their names on the list. But we want the younger men to come forward, not to be content with being members only, attending the classes and lectures and doing no practical work, but to work in sober earnest, and to contribute that bone and sinew to the Society which shall make it strong, powerful for good, and respected. If students as they join will do this, then the future of the Architectural Association may be a bright and prosperous one, and we may see it grow, year by year, into an institution which shall possess valuable facilities for instruction far beyond what we have at present. The vision of a college where the art and science of architecture shall be taught, and the services of our greatest architects secured for teaching the various branches of the profession, is a vision that has been before our eyes for many a long year; and when one reads the valuable papers contributed by Mr. William H. White, Mr. R. Phené Spiers, and others, on the thorough system of art education as carried on in France and Germany, especially in the former, and learns what great results follow and how highly the profession and its professors are esteemed, one's heart sinks and mourns over the want of system and thoroughness which characterises the education of architects in this country. As Englishmen we should perhaps rebel at the strict academical course of teaching which is adopted abroad; but how much we might learn from it, and how valuable it would be if we could adopt some such system, so that the profession should in this country take the high position it does in France, when the State should recognise the duties it owes to art in the education of the people and the pre-eminent position of the Empire in the eyes of the world, and not, as now, entrust their buildings to the engineers and officials of South Kensington, and maintain an office of salaried architects for carrying out public architectural works, but seek out for employment and counsel those architects who have fairly won their reputation. As a profession we have been much to blame in the past for allowing this state of things to be brought about. The very want of such a system as for something like two hundred years has existed in France, has resulted in want of sympathy and union between the members of the profession, and the profession and the public, which, had it been otherwise, would have given strength, so that we should have compelled recognition in the highest quarters by the right of having conquered difficulties, and have been able to show that men who had studied the art and science of architecture, and won distinction in their profession, were the men to entrust public buildings of importance to. The commercial spirit of this country has too little sympathy with the artist. If we are to succeed in turning out architects highly educated in their profession, we must have better machinery than at present exists. If we were in thorough earnest as a profession in this endeavour, the good might be accomplished; and at a time when the legitimate prey of the architect is being constantly pounced upon by the vultures, the necessity for combination and self-preservation needs but little argument. We in this Association may do much; and in honest rivalry one with another, cultivate the art with ardour, raise it in the eyes of the public, and not rest until it is placed high in the estimation of men, so that they too shall love it and be proud of their public buildings and monuments, and proud, too, of the men who have raised them, so that if the ghost of Sir Henry Cole should rise from the grave, and repeat the question, "What is an architect?" the answer may be taken from the tomb of the great Sir Christopher Wren, and slightly modified be, "If you seek to know, look around."

Mr. ASTON WEBB moved a vote of thanks to the President



for his address. A somewhat melancholy view had been taken by the President, but this was not the first time that remarks had been made from the Presidential chair that the vitality of their Association and the *esprit de corps* of the members was not equal to what it had been in past years. He considered that, in reality, the same amount of interest as ever was taken in their work by the members. He hoped the President, as member of the Council of the Royal Institute of Architects, would not allow the solemn chill of the upper house to interfere with the energy he had displayed downstairs. Architects, he thought, paid quite enough attention nowadays to sanitary science and quantity surveying—they were well up in these matters. Sanitary science had no striking results to show during the last half century, so if they wished to produce good work, students should look to art rather than to science, and, having put before them a high ideal, strive to arrive at that ideal not with mechanical perfection, but with artistic perfection, which could only result from a true love of the art they professed.

Mr. H. L. FLORENCE seconded the vote of thanks. While thoroughly coinciding with the President's views in the main, he said he did not consider the proportion of members who attended the classes was at all unsatisfactory. The members of the Association were very numerous, but the bulk of them were necessarily senior members, and members who had passed through the classes.

Mr. M. B. ADAMS said the President's remarks on the study of sanitary science were not a whit too strong. In the present days of competition, when specialists were coming more and more to the front, an architect who aspired to succeed in the higher branches of his profession ought to go thoroughly into these matters.

Mr. GOTCH wished that a system of education existed that pupils could devote the day-time to study instead of having only such hours as they could snatch from their leisure-time after the day's work was over. The study of literature for an architect was second to no other studies. An architect must needs be a man of culture, and apart from diction and style and that it would enable a man to write an intelligent report, it would teach him to spell correctly. It had been his lot to look over many architects' reports, and it had been painful to see the egregious mis-spellings.

Mr. BRODIE described the present system of pupilage as a crying evil. The premiums were so much money obtained on false pretences. Study of quantity-surveying though not always a part of an architect's work, was necessary if a student wished to be able to write a specification well.

Mr. W. H. ATKIN BERRY, hon. secretary, explained that the suggestion for doing away with essay prizes came only from the committee of one of the classes in their own interest, as they were desirous of offering another prize to their class.

The vote was then put by Mr. WEBB to the meeting, and carried by acclamation.

The PRESIDENT acknowledged the compliment, and, in his reply, observed that he had been received by the Council of the Institute with the greatest courtesy and his opinions listened to with the greatest attention, which proved that the large body of members he represented in the Association exercised a real weight and influence. As to his remarks on their internal affairs, it was his duty to be somewhat melancholy rather than represent everything *couleur de rose*. He wished to stimulate their energies, which would not be done by letting them think there was no room for improvement. As a result to be gained, he proposed that practical men should endeavour to become also artistic, and the artistic, on the other hand, to become also thoroughly practical.

## THE SCOTTISH NATIONAL PORTRAIT GALLERY.

WE learn, says the *Scotsman*, that the Board of Trustees for Manufactures has now completed the purchase of the ground in Queen Street selected as the site of the proposed National Portrait Gallery. Our readers will recollect that some considerable time ago an unknown donor placed at the disposal of the Board, for the establishment of the institution in question, the sum of 10,000*l.*, on condition that from Government or some other source a similar amount should be obtained. An application to the Treasury met with encouraging success, and the Board being thus placed in possession of 20,000*l.* as the nucleus of a portrait gallery fund, the question of providing a local habitation for the proposed collection came next to be considered. Among other schemes that were mooted was a proposal to find accommodation for the Society of Antiquaries in the new wing about to be erected of the Museum of Science and Art, and to appropriate the rooms they presently occupy for the Portrait Gallery. To this arrangement, however, at least in the form which it took, the Antiquaries were found to be strongly opposed; and matters seemed to have come pretty much to a standstill, when the munificent donor of the original 10,000*l.* stepped forward with an additional offer of 20,000*l.* to erect a building in which the national portraits and the Antiquarian Museum should be jointly accommodated. With this

offer there was coupled the proviso that a site for the intended edifice should be provided by Government grant or otherwise, so that the whole 20,000*l.* might be available for building purposes. The Treasury was again approached, with the gratifying result that 7,500*l.* was forthwith promised for the purchase of the necessary ground, and it is, we believe, at this price that the Queen Street site has been acquired.

Situated on the south side of the street, between North St. Andrew Street and North St. David Street, the area in question, which at present lies vacant, has the shape of a regular parallelogram, measuring some 260 feet in length—that is to say, along the line of Queen Street—by about 70 feet in width. It has the advantage of being completely isolated, so that any building erected upon it will be well seen, while less exposed to the risk of fire than if in contact with other property. The situation, too, is desirable, as being easy of access from our principal thoroughfare, and within a few minutes' walk of the School of Art, the National Gallery, and the rooms of the Royal Scottish Academy. The preparation of plans for the proposed structure is now being pushed forward by Dr. Rowand Anderson, architect to the Board of Trustees. From the designer of the New Medical School the public will confidently expect an edifice worthy at once of the site, of the city, and of an important national institution. The design adopted will probably be of such a nature as will enable the Board at once to make ample provision for the present and immediately-prospective requirements both of gallery and museum, while admitting of future extension, or rather completion, in accordance with the original scheme, as necessity demands and resources become available.

Meanwhile, pending the commencement of the permanent building, steps are to be taken without delay for the erection of a temporary structure, on part of the newly-acquired site, in which the portraits at the disposal of the Board, and such others as they may receive on loan, will be exhibited to the public. There have already, as we mentioned the other day, been promised for twelve months about sixty canvases from the Loan Exhibition recently closed. Several desirable portraits that figured in the same collection have been acquired by the Board for the permanent gallery; and it is understood that the Watson collection of prints, in possession of the Board, embraces a considerable number that will be found worth exhibiting. It will be readily understood, however, that if left dependent for its expansion on the funds at the command of the Board, the national collection must necessarily be of very slow growth. The interest of 20,000*l.*, after providing for the maintenance of the gallery, will not go very far in the purchase of valuable paintings. All the more urgent, then, is the call upon patriotic Scotsmen who may be possessed of historical portraits to remember the claims of this great public institution, and upon public bodies to seek here a safe repository for paintings that should be better known than they can ever become in their present quarters.

The prospective removal of the Antiquarian Museum from the Royal Institution will clear the way for a rearrangement of that building that shall give adequate accommodation for the School of Art. At present the work of this school, which was last year attended by about one thousand persons, is sadly hampered for want of space. It was at one time proposed that new rooms should be found for it at the Museum of Science and Art; but this idea has now been abandoned, it being thought desirable that if possible the school should be retained in the near neighbourhood of the National Gallery, the Royal Scottish Academy, and the National Portrait Gallery. With the space now occupied by the Antiquaries at their disposal, the Board should be able to make such arrangements as will secure the comfort of teachers and pupils, and generally promote the efficiency of the institution.

## EMMANUEL COLLEGE, CAMBRIDGE.

THE whole of the windows in the chapel of the above college have recently been filled with stained glass. The style of the work is Classic, and the arrangement consists of rich figure-work panelled, under canopies, with a framework of elaborate detail. Each window contains two figures of men celebrated in history for their great learning and types of scholarly character. They are arranged to commence at the east end, and read thus:—1, Origenes; 2, Jo. Erigena; 3, John Colet; 4, Wm. Tindale; 5, Benjamin Whichcote; 6, Peter Sterry; 7, John Smith; 8, Wm. Law; 9, St. Augustine; 10, St. Anselm; 11, John Fisher; 12, Thos. Cranmer. The landscape behind each figure is, as far as can be ascertained, perfectly correct in detail. The Rev. A. Rose, M.A., Bursar of the college, lent valuable assistance in providing the authorities for this part of the work. Messrs. Heaton, Butler & Bayne, of 14 Garrick Street, Covent Garden, London, designed and executed the work, under the supervision of the architect, Mr. W. A. Blomfield, M.A.

Messrs. Diespeker & Co. have carried out the mosaic floors in chancel and sanctuary at St. Cuthbert's Church, Hunslet,



## NOTES AND COMMENTS.

AN interesting collection of printed books, illuminated manuscripts, engravings, and antiquities, relating to the history and to the artistic life of Antwerp, will be sold in that city on the 4th inst. and following days. The collection represents the labours of four generations of antiquarians, and from their names is known as the VAN DER STRALEN-MOONS-VAN LERIIJS Collection. The catalogue of it has been very carefully compiled by one of the librarians of the city's public library. Among the books to be sold, numbering in all 20,000, are several very rare specimens of the earliest productions of PLANTIN's press. There are also several pictures by RUBENS and other masters.

THE only standards of 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12 inches respectively, which the Standards Department of the Board of Trade has been hitherto provided with, have been certain measures engraved or marked on a bronze bar, which were verified by the Standards Commission in 1870. These latter measures are well adapted for use when the micrometer-microscope may be used in their comparison, their lengths being defined by fine lines engraved on the bar. For much practical work it is, however, necessary to refer to standard measures whose lengths are determined by the distance between the ends of bars, or by contact. Standard end-measures of 12, 6 and 3 inches respectively were transferred to the Standards Department from the Royal Observatory in 1866, but there is no record of the particulars of the verification of these standards, and as they have been found to differ from other standards, it became necessary to obtain and carefully verify a new set of end-standards of the multiples of the inch. A series of new end-standards have been accordingly obtained by the Board of Trade from MESSRS. TROUGHTON & SIMMS and from Sir J. WHITWORTH & CO.

THE Académie des Beaux-Arts in Paris has awarded the prizes which are available for architects in practice. MM. SEVELINGES and MARGOTIN have obtained the 1,500 francs which represent the DESCHAUMES legacy, and M. BLAVETTE the JARY prize. The prize of 1,000 francs, founded by Mme. ESTHER LECLÈRE as a memorial of her brother, was awarded to a design for a provincial museum by M. GEORGES CHADANNE. The important prize established by M. DUC for the encouragement of a high class of architecture has been divided between M. ALBERT BALLU and M. ALFRED VAUDoyer. The Académie proposed a design for *Un établissement thermal d'eaux minérales* for the Grand Prix. The first prize has been carried off by M. D'ESPOUY, a pupil of M. DAUMET. The 'premier second' was awarded to M. DEBRIE, and the 'deuxième second' to M. DEVIENNE.

THE Health Exhibition closed on Thursday after a season which must be considered most successful, if the number of visitors can be taken as a test. Such a result was not anticipated by every one. The death of the Duke of ALBANY, the depression of trade, and other causes were at one time supposed to be likely to be impediments to a prosperous season. It is fortunate that Fate has been propitious, for a failure in one year must influence successive exhibitions. "The Healtheries" has aided in increasing the enjoyment of the public, and for that we are all grateful. But it is not yet plain whether the exhibition has done much to advance sanitary knowledge. The exhibits have not been studied by the majority of visitors, the lectures have not been attended by the public, and the very useful hand-books have not become popular. The gardens, bands, and Chinese Court have been the main attractions, and sanitary appliances have been in reality little more than means to drive the visitors into the grounds. Very many of the exhibitors are not satisfied with the exhibition or with the office they were made to fill, and we shall be surprised if there is not some plain speaking on the arrangements.

WE trust that the authorities of the South Kensington Museum will persuade the Corporation of Bath to make a present to them of the excellent model of the Old Roman Bath. It is undoubtedly the best example of an archæological model that has been prepared in England. It is also a memorial of the perseverance and insight of Major DAVIS, the city architect, who has, under great difficulties, followed out a theory, and at length succeeded in revealing the greatness of the Roman sanitary system in Bath. The model is worth a

dozen lectures on Roman life, and should be placed in some position where it may become an aid to public education. The collection of photographs would also be most useful in a public institution, as illustrations of Bath and the life that was led there.

MR. J. T. WOOD appeals for aid to enable him to continue his excavations on the site of the Temple of Diana at Ephesus. He believes that there were one hundred and eight sculptured drums of columns, from 5 feet 7 inches to 6 feet in diameter. Five only have been recovered. Mr. WOOD considers that the drums would probably be rolled to a certain distance from their original position, and a number of them may still be found at no great distance from the present limits of the excavations. Portions of the sculptured frieze and other parts of the temple might also reward research, if subscribers would only furnish the means to pay the labourers.

THE Handbook on the Water-Supply of London, which has been issued in connection with the Health Exhibition, is an amazing shilling's worth. Over two hundred pages of type, several maps and diagrams, form a body of matter that should, from its quantity alone, satisfy the most exigent. But the information is of a kind that is now especially useful. People talk about the defects of the Metropolitan water-supply, but very few are in a position to have mastered the subject. Information upon it has not been readily accessible up to the present. Sir FRANCIS BOLTON, from his office, is able to give all necessary details respecting the sources of supply, the histories of the companies, the methods of filtration, the quality of the water, the cost of works, &c.; and every ratepayer is consequently able to know as much on the subject as any member of the Legislature. Sir FRANCIS BOLTON is of opinion that while the existing supply is fairly satisfactory, it is practicable to introduce many improvements by which waste of water would be preventible. The chief alteration would be the adoption of a system of constant supply. According to the last returns there were only 258,205 houses in the metropolis with such a supply.

THE first report of the Nineteenth Century Art Society shows a fair prospect, considering the difficulties attending ventures of the kind. The operations of the society began in September, 1883, and an exhibition was opened in November of the same year, with a collection of 240 works, contributed by 140 members. This list of members was augmented on the occasion of the society's second exhibition in February, 1884, to 200; and by the third exhibition in May, 1884, the number of members had reached the allowed limits. The three exhibitions have been successful. The number of pictures sold has been 220, being the works of 100 different members—a proportion which has never been arrived at by any existing society; and it is assumed that, but for industrial stagnation, this large proportion of sales would have even been exceeded.

MR. W. M. F. PETRIE was able on Wednesday to give a satisfactory account of his exploration at San (or Zoan), which has been conducted at a very small cost. The area of the district is large, and some of the mounds are 80 feet high; but the whole of the ground has been examined to depths of ten, twenty, or thirty feet, so that there is not a space of more than three hundred yards in any part untouched by excavations, and many districts have been riddled with pits. In some places remains were found that probably went back to before the Egyptian empire, perhaps to the Hyksos period; but in by far the greater part of the workings Greek and Roman remains were met. Twenty years ago M. MARIETTE cleared a part of the site of the temple, and Mr. PETRIE believes that by cleaning and clearing around every accessible block of stone, and by copying every fragment of inscription that can be found, the most complete account has been rendered of any site in Egypt. Among the discoveries outside the ruins of the temple are two large wells of Greek or early Roman age, with staircases leading down to the water, by which the people descended to fill their pitchers. In one house (of the time of AURELIAN, 174 A.D.) was found a glass zodiac, with the heads of the months painted in ochre and the signs laid on in gold foil. This is the only Roman zodiac yet found in Egypt, the only representation of the heads of the months, and the only example of painting on glass found in that country, or, indeed, elsewhere, excepting a vase found in Cyprus. Along with the zodiac was found the only glass lens yet discovered in Egypt. Mr. PETRIE has been examining other sites, and expects to obtain permission from the Egyptian Government to explore them.







LITTLECROFT, NEW FOREST.  
ERNEST GEORGE & PETO ARCHTS.









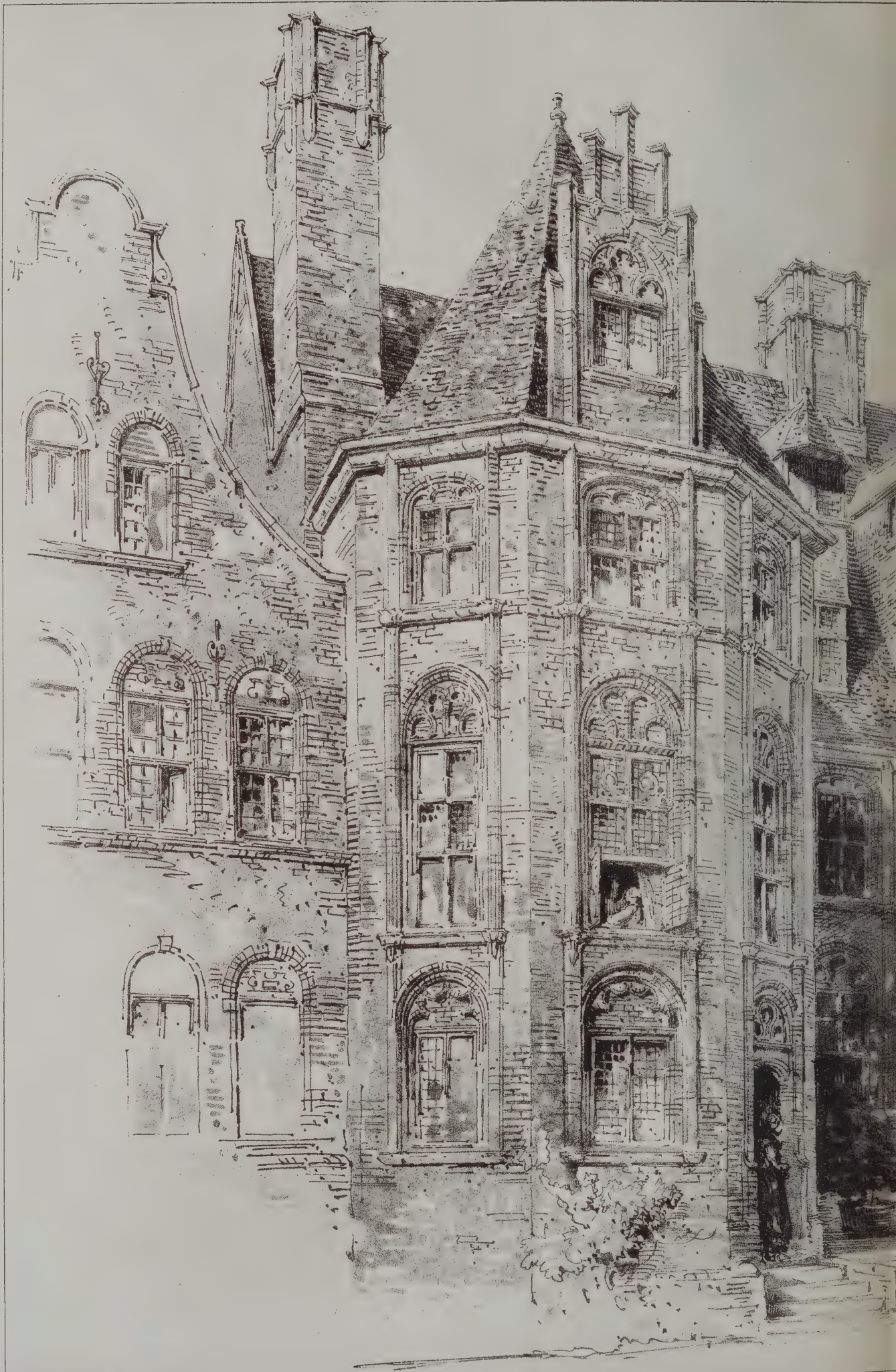
COLLINGHAM GARDENS, S.W.  
ERNEST GEORGE & PETO, Arch<sup>ts</sup>.













1884.

COLLINGHAM GARDENS, S.W.  
ERNEST GEORGE & PETO, Archts.













THE KNOLL, BARTON  
ERNEST GEORGE & PETO, Arch<sup>ts</sup>



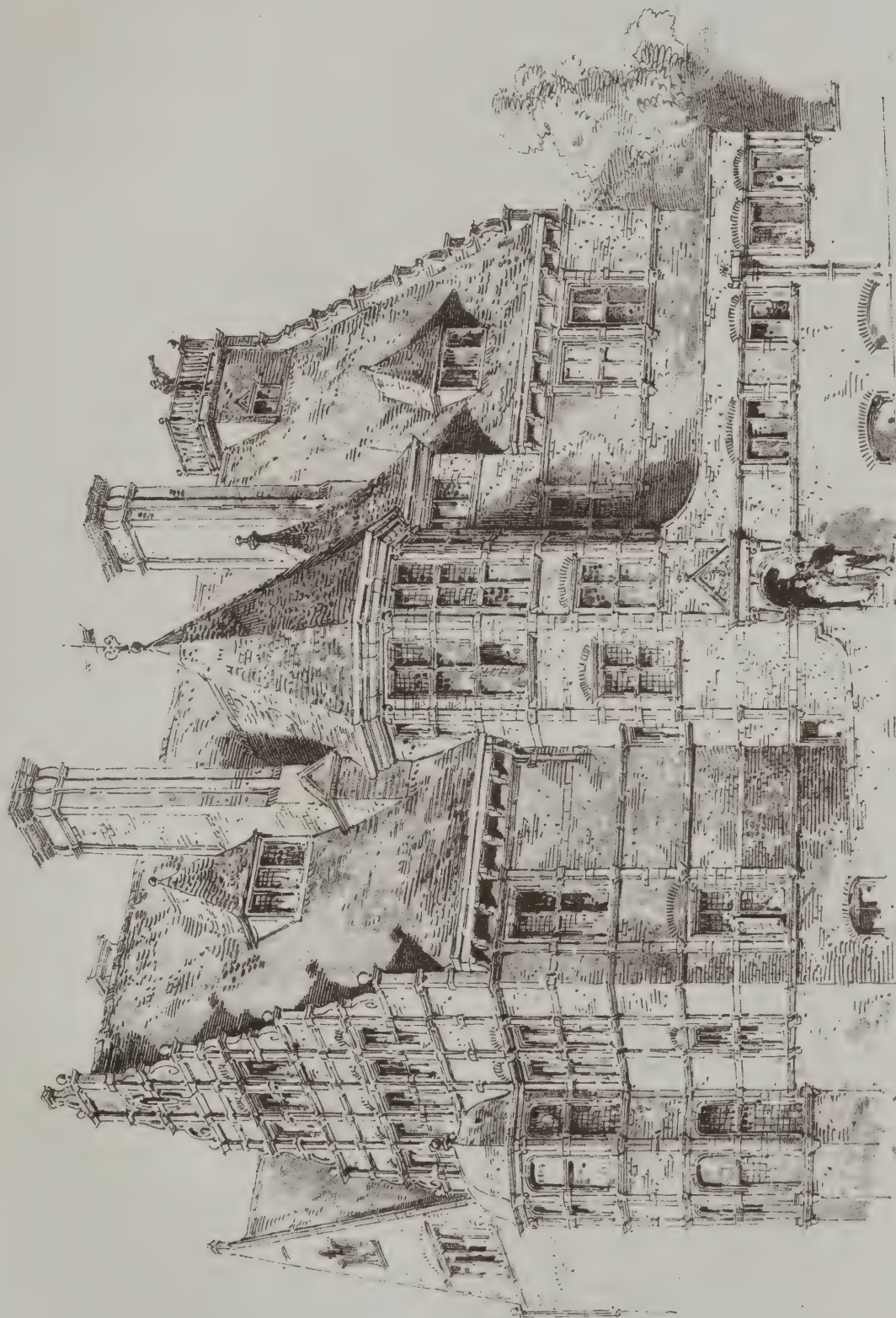












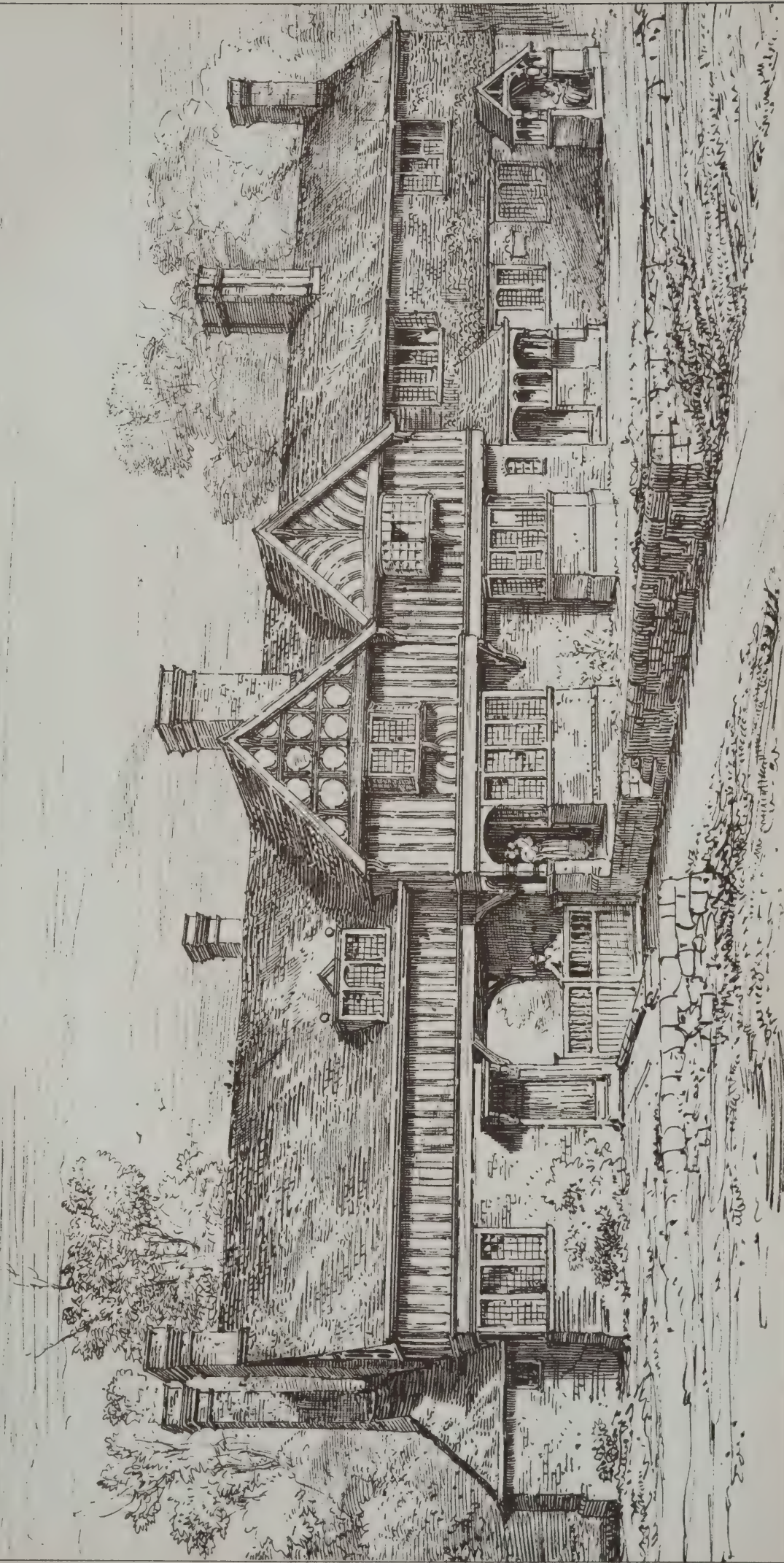
COLLINGHAM GARDENS, S.W.  
ERNEST GEORGE & PETO, Architects.







LODGE & COTTAGES CLANDON  
for THE EARL of ONSLOW  
ERNEST GEORGE & PETIO, Archts









## ILLUSTRATIONS.

TOWN AND COUNTRY HOUSES, BY MESSRS. ERNEST GEORGE &amp; PETO.

WE this week illustrate various works now in progress by MESSRS. ERNEST GEORGE & PETO. The houses in Collingham Gardens, Kensington, form a companion group to those by the same architects in Harrington Gardens, which we have previously illustrated. The group of houses will form one of the most exceptional and complete things of the kind which can be found in London; as, when finished, there will be a double row of quaint and gabled houses, with a public garden between them; and outside the entire plot run the streets, thus isolating it from the adjoining houses. The houses are so arranged that they all of them face the public gardens in front across the streets, as well as those in the rear. There will be in all some eighteen houses. The architects having received many applications for the purchase of the houses built in Harrington Gardens, which having been carried out for various clients were not for sale, suggested to Messrs. PETO BROS., the contractors, to take one of the few remaining open sites available to build a similar but more complete scheme as an investment, after the manner of those in Harrington Gardens. Some of the houses will consequently be for sale, others are built for private orders. The house No. 1, a corner building, is long and low, with four gables on the flank wall. The house has four tall bays, one of which forms the porch. The mullions, quoins, and all dressings are of buff terra-cotta, which goes well with the red brick. The material has allowed the architects to use refined mouldings and elaborate "stops," that would have been costly carved in stone. This corner house having three external walls has all the comfort and light of a country house. The rooms are entered from a panelled hall 34 feet long, with a high stone chimney, and with a large bay and other windows. Round the hall are grouped dining-room, morning-room, and drawing-room. An archway leads to the staircase, which works round a square well-hole, with continuous arcaded newel posts. A screen and curtain cover the passage between the back stairs and front door, so that the hall may be used as a place of reception without disturbance from servants crossing it. This house is English in its composition and detail.

On another page we show a pair of houses with a Flemish treatment; they are entirely of red brick, with tracery and mouldings of brickwork. The window frames and casements are of wood with lead lights; here there are no mullions, but each pair of casements opens clear. These houses have stepped gables and dormers and angle brick pilasters running out through the gables. The high roof contains two storeys of rooms lighted by tall dormers in two heights. The court, open to the road on one side, is not to drive into, but it will be paved with mosaic, and arranged with plants in tubs, while it pleasantly lights the hall and stairs of both houses. On entering we find an ante-hall and library of low pitch, then up a few steps is the hall, dining-room, and morning-room, one short flight of stairs bringing us to the drawing-room over the low portion of ground floor. These houses have interesting staircases, panelling, and parquet ceilings, some rooms showing the joists, or with wood panelled ceilings.

Our third page from this group of buildings, though not yet begun, is designed for a client at the other corner of the ground, this again having three external elevations. The building is in terra-cotta, with red brick, and has moulded string-courses and labels, as well as vertical bands or pilasters dividing the windows. The windows, except where mullioned to the staircase and bay windows, have wood frames, transoms, and casements opening in pairs without mullions. After the tall, stepped, and enriched gables, the octagonal staircase turret is the principal feature, containing circular stairs. Another requirement that has been made to give interest to the building is a stage to be used as observatory at the apex of one of the gables. This house may be considered more German or Flemish than English.

An interesting house that we are unable to show in this number is the one built for Mr. HAROLD PETO (ERNEST GEORGE & PETO), in which the owner has carefully studied his own tastes and wants. The house is of red brick, with stone mullions and lead lights, many good bits of old German glass being introduced, as well as a quantity of good old tile-work. The dining-room has a beamed ceiling and an ingle-nook. The walls covered with original sixteenth-century stamped and gilded leather above an oak dado. The hall is panelled, and

has a hooded stone angle chimney up to the low-pitched oak ceiling. The house is roofed with thin stone slabs in the manner of the old Sussex houses, and while it gives a good texture to the roof, it is at the same time an agreeable change from the prevailing red tiles around. There are other houses larger and smaller, and all with a diversity of plan and treatment.

The Knoll, Barton, is being erected for Mr. JOHN WALKER. The ground-floor is of red brick, and the upper storeys are here shown of weather tiling; but since the drawing was made the design has been changed to oak quartering and parquet-work for most of the upper portion. The contractors are MESSRS. MASON & EDWARDS, of Burton-on-Trent.

Lodge and Cottages, Clandon, have just been built for the Earl of ONSLOW. The external quartering, as is always the case when MESSRS. ERNEST GEORGE & PETO use it, is constructed in solid oak, the latter being left with the marks of the tool—adzed, and not sawn or wrought. The upper floor is carried over the road, thus forming a covered gateway to the park. The builder was Mr. SAVAGE, of West Clandon, who carried the work out very satisfactorily.

Littlecroft is a house and studio now building in the New Forest for Mr. MORTON K. PETO. The external quartering is of oak, with parquet filling-in. The slope of the ground is taken advantage of so that an extra room is obtained in the height of the main gable, a boudoir being arranged on the first landing and above the porch. The oak staircase is worked in a square space behind posts and arches, and can be screened by curtains from the hall, which latter is arranged to form an additional room to the house. The studio has an open roof and gallery at one end. The dining-room has an ingle behind an oak arch; overhead the beams are shown, and a ceiling of wood, panelled with mitred mouldings.

## MR. RUSKIN'S LECTURES.

THE second of his series of lectures on the "Pleasures of England" was delivered by Mr. Ruskin, in the lecture-room of the University Museum, Oxford, on Saturday afternoon, the subject being "Edward the Confessor—The Pleasures of Faith." The Professor commenced by observing that he was forced to pass rapidly over the part taken by the Scotch missionaries in the Christianisation of England and Normandy, and he referred them to his published works for detailed accounts of his views on the Ionian mission. In connection with his original proposition in his first lecture of what London might have been if no flowers, trees, and children born at the Thames side had been rightly cultivated, he said that many of his hearers could imagine better than he the look London must have had in the days of Alfred. He exhibited a drawing of a coin of the time of Alfred, which contained the letters of the word London interwoven in a monogram. That coin, he said, was entirely characteristic of the literature of the Empire, each letter being emblematical of the progress of art. The picture was that of Alfred's silver penny, struck in London at the beginning of the beautiful English coinage. They might have lost the idea of what most of the buildings in London were like in Alfred's day, but certainly the groups of shipping were simply superb—small but entirely seaworthy vessels, manned by competent seamen. The ships that then lay at London shore were bright with banner, shield, and dragon. Instead of these we now had the penny steamer, the coal barge, and the wherry full of shop-boys and girls. He dwelt only on the naval aspect of London waters in order to refer them to that wonderful chapter of Dean Stanley's on Westminster Abbey, where they found the origin of the name of London was given as The City of Ships. He (the Professor) had often said to friends who had praised his books that he would rather have written that chapter than any volume of them; but if he had been able to write the historical part of it, the conclusions drawn would have been widely different. The Dean, indeed, described with poet's joy the river of the wells which once rose from those sacred streams which now lay clouded in Holywell and Clerkenwell; but it was only in the spirit of the modern side of Belgravia that he discerned a quaint humour in the fact that the great arteries of our crowded streets, the vast sewers amidst our habitations, were fed by the life-blood of those old and living streams that underneath the Tyburn, Holborn, Fleet, and Walbrook were still pursuing their ceaseless course, still ministering to the good of men, although far differently than when Druids drank of their sacred springs, and Saxons baptised in their rushing waters long ago. Whatever sympathy they might feel with those eloquent expressions of the present, the past, and the future which peculiarly animated Dean Stanley's writings, he (Professor Ruskin) must pray them to observe that the transmutation of holy wells into sewers had, doubtless, destroyed the charm and utility of the



Thames as a salmon stream. They were all of them taught by Lord Macaulay and his school that because they had carpets instead of rushes for their feet, feather beds instead of ferns for their backs, kickshaws instead of beef for eating, and drains instead of holy wells for their drinking, that therefore, they must positively be the cream of creation—every one of them a seven-headed Solomon. They might believe in their present habits and circumstances as they pleased, but do not let them decry the practices of their fathers until they had trod the cold earth bare-footed and seen the heavens face to face, as the latter had done. If they cared to see and know these things for themselves they might do it for little pains. They need not do any great thing, they need not keep one eye open and the other shut over a microscope for ten years, but need simply do, as king after king of the Saxons did—put shoes on their feet and a cloak on their shoulders, and walk to Rome and back, sleep by the roadside when fine; take shelter in an outhouse when wet; and live upon bread and water, an onion or two, and rain; and if the experience they had learned on their return did not deserve the name of spiritual, at all events they would not be disposed to let other people call such proceedings either poetry or fiction. Mr. Ruskin quoted largely from Dean Stanley with regard to the establishment of Westminster Abbey, and, in referring to the character of Edward the Confessor, said that king was in many respects of a childish temperament, but was governed, guided, and inspired by men of the widest and most brilliant faculties, whether constructive or speculative, that the world had then ever seen, or, he believed, had seen since. He read a sample of the philosophy of St. Augustine, a prayer of Alfred's, and a letter of Canute's, and remarked that, whatever they might feel respecting the beauty and wisdom of these compositions, they might be assured above all of one thing—that they were true and sincere. The ideas of diplomacy and priestcraft of recent times—the last three centuries—were wanting. No false knight or lying priest ever prospered, the Professor believed, in any age, but certainly not in the dark ones. He did not say a man did not prosper by wrong-doing, but he did say that he did not prosper by telling lies. We continually heard of the trials, sometimes of the victories, of faith, but scarcely ever of its pleasures; whereas at this time in those dark back ages they would find that the chief delight of all good men was in the goodness and the wisdom of the Master who had come to dwell with their spirits upon earth. In everything that we now did, or now sought, we exposed ourselves to countless misery, shame, and disappointment; because in our doing we depended upon nothing but our own powers, and in seeking chose only our own gratification, and could not for the most part conceive of any work but for our own interests, or the interests of others about whom we were also selfishly interested. We were anxious in the same faithless way for everything about which our passion was excited or our skill was exercised; and the idea of doing anything except for our own praise and glory was narrowed within the precentor's invitation to the company of little voice and less practice to sing to the praise and glory of God. Were any of them willing, simply as a philosophical experiment, in the interests of the greatest of sciences, to adopt the sympathies and feelings of those men for a given time—say for a year? It could not possibly do them any harm, and they could not possibly learn the truth of those things without trying. If, after a year's experience of such life, they found themselves no happier than before, at least they would be able to support their present opinions with more grace and with more modesty. If they would not do this; if they had not the courage nor the heart to break away the fetters of earth, and to take up their sensual bed and walk; if they said they were bound to this one thing and that the interests of their friends, the bias of their genius, the bent of their energies, and all the rest of the bow-wow of the wild-dog world must be attended to whether they liked it or not, then at least let them give up talking about being free and independent creatures—let them recognise themselves as slaves. Then at least also, for shame, if they would not believe there were men who gave themselves to God, let them know and confess how surely there were those who sold themselves to His adversaries. The subject of the next lecture is, The Confessor to Cœur de Lion—"The Pleasures of Deed."

### THE ROSSETTI MEMORIAL WINDOW.

THE memorial window for Birchington Church, which he was asked to undertake by the mother of the late D. G. Rossetti, has been completed by Mr. F. G. Shields. The design, "Christ at the House of Simon the Pharisee," by Rossetti himself, was first adapted for one of the two lights, but this was disallowed by the custodian of the church on the ground that the incident was not in Scripture. Another design of Rossetti's has therefore been chosen—"The Passover." The second light is designed by Mr. Shields, and it balances with his late friend's rearranged work. The glass is admirably executed by Messrs. Heaton, Butler & Bayne. The following description of the subject is by Mr. Shields himself:—"The Passover. The boy Saviour, clad in red, holds a brazen bowl, with the blood of passover lamb, and stands on the

threshold of the Nazareth home, leaning against its door-post. Zacharias, father of John Baptist, with a sprig of hyssop sprinkles the lintel. The young Baptist kneeling at the feet of Jesus loosens His shoe's latchet. The Virgin gathers bitter herbs—wild succory—and more distant Joseph, with the slain lamb upon his shoulder, proceeds with the aged Elisabeth to roast it with fire. In a field beyond another lamb draws suck from its mother ewe. Within the house, under the spreading vine leaves that cover the outer wall of the lowly home, is seen the spread table with a skin of wine and cup upon it, and a plate with unleavened bread. In the foreground, a well; around it the forget-me-not clusters. Inscription—"Christ our Passover is sacrificed for us." The Blind Man Cured (Mark viii. 22). The moment chosen is that wherein the Lord, after His first putting His hand upon the blind man, asks him, as He leads him out of the gate of the little city of Bethsaida, if he sees aught, and he, looking up, answers, "I see men as trees walking." The aim of the design is thus to express the gift from utter darkness of a dim, uncertain light, and the eager desire for full vision. The blind man carries an ancient three-stringed Eastern harp, of very primitive construction. Within the city, under a low-arched narrow street, are seen a Pharisee and his young disciple. The latter turns with a longing look of inquiry towards the compassionate Lord. But he is restrained by his Rabbi's hand upon his shoulder, who sternly admonishes him not to be led away by a false prophet. Above this Pharisee's head there towers in the distance a laden camel. "Ye blind guides, that strain at a gnat and swallow a camel." The same idea of antagonism to Christ *within* the city is echoed in one of the wild dogs of the Eastern streets, who lies with a litter of blind cubs at the side of the gate, and growls angrily at the passing by of the Lord. For as the unclean dogs are excluded from the New Jerusalem of the Apocalypse (Revelation xxii. 15), so within the city of the world they throng, and in the Scriptures they are named as types of persecutors, false teachers, and unholy men. A flight of seven doves, emblematic of the sevenfold fulness of the Spirit, hovers over the head of the Lord Jesus, and leaves the city with Him darkening in the evening shades. Beyond are the green pastures, bright in the last rays of the setting sun, and in their midst a fold, towards which sheep and lambs are gathering and being enclosed by a shepherd in safety from the nocturnal beasts of prey. More distant is the Lake of Galilee, with fishing-boats dotting its surface and the crescent moon rising. Inscription—"I am the light of the world."

### EARLY CELTIC MONUMENTAL INSCRIPTIONS.

IN the fourth of the present course of Rhind Lectures in Edinburgh, on "Early Celtic Monumental Inscriptions—Ogham," Sir Samuel Ferguson, Q.C., concluded the examination of Oghamic inscriptions in Ireland. Beginning with Killeen Cormac, in the county of Kildare, attention was directed to a fine pillar-stone lying near the foot of the grave-mound, inscribed in Ogham and in Roman characters. The latter meant either "the stone of Iver the Druid" or "the stone of the four true Druids." As this was the only instance of the mention of Druids on any known lapidary monument anywhere, the inscription could not but be regarded with extraordinary interest. A number of other Oghams in the neighbourhood were also described. A great number of inscriptions existed in the Cave of Drumlohan, north-east from Stradally. The stones forming the walls and roof almost all bore Ogham legends. Between Youghal and Cork, south of the Blackwater, and thence reaching westwards, began an almost continual succession of Ogham sites and monuments, extending to Kerry and the Atlantic. In the parish of Donoughmore, a farmer when ploughing some years ago found some great stones under the surface, forming a kind of pit, which contained black earth and ashes, interspersed with broken pottery. The stones on being removed were found to bear long and unusually perfect Ogham inscriptions. The ashes, &c., might indicate a boundary mark, and, if so, one could hardly look on the names recorded on the stones contained in it as other than those of proprietors taking this method of perpetuating the evidence of their titles. The forms of the inscriptions, however, did not encourage this idea. In the churchyard of the church of St. Olan, in the parish of Aghabrillog, stood what was regarded as St. Olan's pillar-stone, though the legend it bore did not commemorate him by that name. The pillar was inscribed nearly from end to end, and from various considerations the lecturer puts its date at some time in the latter part of the sixth century. The surrounding country might really be called a "lettered" moorland, so numerous were the Ogham remains. The speaker next dealt with inscriptions found in the upland between the Lee and the Bandon. The Ballybank monument, acquired by the Royal Irish Academy, was a small smooth slab, which preserved a remarkable name, Forttiguon. It had had quite a fascination for the mind of the late Rev. Daniel Haigh, who conceived this to be the name of the British king Vortigern, the inviter of the Saxons. Vortigern was an ally of the Irish Scots. After the loss of his kingdom he disappeared—some say burnt by fire from heaven; others, swallowed up by the earth;



others, in exile. His son, Pascent, continued the struggle; and was accompanied to Ireland by Eopa or Eobba. Digits in the Ogham, among other reading, yielded the name Hioba. Thus, if Mr. Haigh's reading were the true one, the word gave a good countenance to his belief that it was this Eobba who caused the monument to be engraved. Passing on, the lecturer said the grandest example of an Ogham inscribed pillar stood on the southern shore of the estuary of Kenmare. It was 25 feet long, and bore an inscription. The peninsula on the opposite side of the estuary was rich in Ogham remains. A number of these were described, and, continuing, the lecturer came round to Corkaboy, whence he set out on the Oghamic circuit of Ireland in his second lecture. In conclusion, he said that, looking back on all that had been so far observed, they might pause on some of the more obvious generalisations. First, they would, he thought, be impressed with the generally Christian character of these monuments; next, with the distinctive character of that Christianity which they represented; and thirdly, with the evidences of a popular repugnance towards it, taking its rise some time after the sixth century, and manifesting itself down to the present time. They would be inclined, he thought, to ascribe more weight to the Irish tradition of a pre-Patrician Church than had latterly been accorded to it; and, while regarding Declan, Ibar, Ailbe, and Ciaran as chronologically following rather than preceding Patrick, he would not be indisposed to regard them as representatives rather than creators of the body of Christians who dwelt south of Slieve Cua, and into whose lands neither Palladius nor Patrick, son of Calphurn, ever penetrated. A review of what remained in Ogham lapidary work in Britain might perhaps enable them to take clearer, as they would be wider, views; and he proposed in his next lecture to take up the subject in Wales and South England.

### THE MANCHESTER TOWN HALL FRESCOES.

THE picture upon which Mr. Maddox Brown is now engaged in the great hall (panel No. 5) represents the trial of Wyclif, 1377. On February 19 in that year Wyclif appeared before Convocation, in Old St. Paul's, London, but his great patron, John of Gaunt, Earl Palatine of Lancaster—son of the King, and practically Prime Minister at that time—appeared by Wyclif's side, with Lord Percy, the Earl-Marshall, and soldiers for his protection. The trial, from six o'clock till nine of that winter morn, was little else than an unseemly dispute between John of Gaunt, the sovereign of Lancashire, on the one hand, and Courteney, Bishop of London, on the other, till the citizens of London fancying they heard the Duke threatening their bishop—"to pull him out of the church by the hair of his head"—began such a riot that the trial had perforce to be postponed, and Wyclif suffered to resume his duties at Lutterworth. In the composition near to Courteney, on the dais, sits Simon Sudbury, the Archbishop of Canterbury, depicted as endeavouring, in whispers, to assuage the indignation of his colleague. At Wyclif's feet are seen the five mendicant friars appointed as his counsel, Wyclif not yet having publicly differed with them. The Earl-Marshall is represented as ordering a stool for the reformer, for, said he, "An you must answer from all these books, Doctor, you will need a soft seat," causing the Prelate still greater indignation, but Wyclif remained standing. Constance, John of Gaunt's second Duchess, a Princess of Spain, is shown plucking her spouse back by his mantle, as though in fear he might, in his excitement, do some injury to the Prelate. In the background Chaucer, the Duke's other *protégé*, is seen taking notes on his tablets. John Wyclif died peacefully in his rectory of Lutterworth seven years later.

### THE PROPOSED BRITISH SCHOOL AT ATHENS.

THE Marquis of Bute has given the munificent sum of 500*l.* to the fund for establishing a British School of Archæology at Athens. Although no appeal for support has yet been made to the public, the prospects of the school are already so good that the executive committee are enabled to contemplate the building of a suitable house on the slope of Mount Lycabettus, in the immediate vicinity of Athens, where an excellent site has generously been placed at their disposal by the Greek Government. It is intended that the house should afford a residence for the director, and should contain a library of reference. The aim of the school will be to promote the study of Greek art and architecture in their remains of every period; the study of inscriptions; the exploration of ancient sites; and especially all branches of research which can illustrate Hellenic life and literature, from the earliest age to the present day. Membership of the school will be open to all students accredited by any university or college of Great Britain, by the authorities of the British Museum or of the Royal Academy, or by any other institution qualified to give credentials. The duties of the director will be to guide the studies of the members, and to exercise a general supervision over the researches undertaken by them; to report occasionally on the work of the school, and on any important discoveries which may come to his knowledge; and also to afford information and advice

to properly accredited British travellers in Greece who may apply to him. It is believed that, through the agency of the school, valuable notes might be collected from visitors to the Hellenic countries, who, without being specialists, are competent scholars and observers; and such notes might conveniently be registered in the annual report of the school. The increasing interest in archæological studies which is being manifested in the universities and schools of the country warrants the hope that, when the school has been established at Athens, facilities will be afforded to students desirous of proceeding thither for the purpose of supplementing the knowledge derived from books by a direct acquaintance with the scenes and monuments of Greek life. A general feeling exists that England ought not to remain behind France, Germany, and the United States in the advantage of possessing a permanent centre in Greece for the furtherance of studies which appeal to so extensive and varied a range of intellectual interests; and it is of good augury for the complete success of the enterprise that the general committee, of which the Prince of Wales is president, already includes distinguished representatives of the universities and public schools, of the Royal Academy, of the British Museum, of the Society of Antiquaries, of the Society of Dilettanti, and of the London Society for the Promotion of Hellenic Studies. While it is believed that the funds already subscribed will probably be adequate for the provision of a house and library, further contributions are still needed for the purpose of endowing the office of director with a proper salary, and of creating a printing fund for the publications of the school. Any subscriptions towards these objects will be gratefully received and acknowledged by the treasurer, Mr. Walter Leaf, Old Change, E.C.; by the bankers, Messrs. Grindlay & Co., 55 Parliament Street, S.W.; or by the secretaries, Mr. T. H. S. Escott, 38 Brompton Crescent, S.W.; Mr. James Gow, 13 Old Square, Lincoln's Inn; and Professor Jebb, the University, Glasgow.

### MR. HORACE JONES'S BASCULE BRIDGE.

A SPECIAL meeting of the Court of Common Council was held at Guildhall, on Tuesday, under the presidency of Alderman Sir Francis Wyatt Truscott, to consider a report from the Bridge House Estates Committee in relation to the erection of a low-level bridge, with mechanical openings, from Irongate Stairs, near the Tower, to Horselydown. The design was published in *The Architect* in May 1883.

The report stated that the subject of crossing the Thames by a bridge below London Bridge had for the last ten years been prominently before the Court and the public, and many schemes had been introduced. The only scheme which found favour with the Select Committee on Thames Communications, appointed by Parliament last session, was a low-level bridge with openings. As far back as 1876 the Court, recognising the imperative demands of the East of London, referred the question to a committee to consider the report as to the desirability of erecting a bridge, or subway under the Thames, east of London Bridge, and the committee, in May, 1877, presented a report expressing the opinion that the best means for relieving generally the constantly increasing traffic of the City would be to construct at the site approached from Little Tower Hill and Irongate Stairs on the north side, and from Horselydown Lane and Stairs on the south side of the river, a low-level bridge, with proper arrangements for affording the requisite facilities for the passage of vessels up and down the river Thames. It would appear, therefore, that on the questions both of site and construction there was a general concurrence of opinion in favour of the Little Tower Hill site and a low-level bridge, with openings for the passage of vessels. It was hoped that the Conservators of the Thames would present no objections to the general scheme which a Parliamentary Committee could not meet. The Government too, would not oppose the general scheme provided that certain requirements connected with the Tower were complied with. Many memorials had been presented from the public and the district boards and vestries, expressing great satisfaction at the promptitude with which the Court had taken steps to supply a great public want. The Standing Orders requiring that Parliamentary notices should be given early in November had left the committee barely three months to deal with a question so important, and involving the consideration of so many details and conflicting interests; but designs for a bridge were at once taken in hand by the City Architect, who had submitted to them three designs. The committee having carefully considered those designs, submitted two of them to the Court, one for a swing-bridge and the other for a bascule, or lifting-bridge. They confidently recommended the adoption of the latter design, believing that a bridge of that construction could be more easily and speedily opened than the others. Moreover, the piers would not be so large, and would be only two in number instead of four, and, consequently, very much less of the waterway—namely, 80 feet only—would be occupied. The length of the proposed bridge from shore to shore would be 880 feet, the width would be 50 feet between the parapets, and the height above high-water mark would



be 29 feet, the same as the centre arch of London Bridge, and there would be two piers only in the tideway of about 40 feet, leaving between them a clear way of 200 feet for the passage of vessels. The approaches to the bridge would commence near the northern end of Little Tower Hill, and would have a gradient of about 1 in 70, and on the south side would commence at Tooley Street, with a gradient of about 1 in 40. The architect has estimated the expense of the new bridge and approaches at a sum not exceeding 750,000—an amount not beyond the resources of the Bridge House estates. During the eleven months prior to the sitting of the committee not more than 23 vessels on the average passed Irongate Stairs daily, and the average for ten days in March last was 14.3 per day. The architect, having taken the number of vessels passing during six tides in the present month, found that the latter figure was substantially confirmed.

Mr. Frank Green, the chairman of the Bridge House Estates Committee, in moving the adoption of the report, explained the steps that had been taken from time to time by the Council on this important question, and said that, after prolonged discussion, it was referred to the Bridge House Estates Committee to obtain and submit a design or designs for a low-level bridge, with mechanical openings, to be erected at Irongate Stairs, at the end of the street known as Little Tower Hill, together with an estimate of the expense, with a view to an application being made to Parliament during the present year. Having pointed out that the Special Bridge Committee, who sat for three years from 1876 to 1878, reported in favour of a low-level bridge at Little Tower Hill and Irongate Stairs on the north and Horselydown Lane and Stairs on the south bank, he denied that the erection of a bridge such as was recommended by the committee would interfere in the slightest degree with trade, and expressed a belief that the report contained a great deal of lasting and useful information. The committee had had an interview with the Conservators of the Thames, and had been in communication with the War Office, and in each case the replies had been as satisfactory as could be expected. Moreover, the Court would find by the report that a very large portion of the East End of London had, by a number of resolutions passed at different public bodies, advocated the very action which the committee had taken. The object they had in view was to increase the means of communication across the river at the East End of London; and the resolutions adopted by the various public bodies referred to were most satisfactory in regard to the recommendation of the committee. Mr. J. Wolfe Barry, the well-known engineer, had also been consulted, and the whole matter had been very carefully considered.

Mr. Alderman Isaacs said he should stand by what he had previously said, that he should oppose the erection of any bridge which was calculated to have the effect of interfering with the waterway of the Thames; nevertheless, he should support the report of the committee on the present occasion, because he believed that a bridge such as was recommended would not seriously interfere with the traffic of the river. Before he saw the report he was as determined as man could be to oppose the other schemes. Nothing would have induced him to sacrifice for the wishes of a few that which would be of advantage to the whole of the metropolis. On this occasion, however, he was glad to be able to support very heartily the report of the committee.

The Town Clerk then put the question, and the report was agreed to unanimously amid some cheering.

The business then terminated.

## ARCHITECTURE IN THE UNIVERSITY OF EDINBURGH.

A COURSE of forty lectures on the "History of Architecture" will be delivered by Professor Baldwin Brown in the winter session of 1884-85, with the object of affording to practical students and to others the means of becoming acquainted with some of the chief architectural epochs of the past. The subject of the course will be the chief styles which have prevailed in Europe from the time of the Greeks—Hellenic, Roman, Early Christian, Byzantine, Romanesque, Gothic, Renaissance. The origin and connection of the different styles will be described, and their characteristics illustrated by representative examples. Three points will be specially kept in view throughout:—1. The historical aspect of the buildings. These will be exhibited as in each epoch the outcome of certain social and religious tendencies, and as varying according to the spirit of different ages. 2. The constructive aspect of the buildings. The constructive forms employed at each epoch, with their special capabilities, will be explained and illustrated, as well as the part which construction has played at certain periods in determining the form and æsthetic character of edifices. 3. The ornamentation of the buildings. The decorative details employed in the best examples of each style will receive full illustration, both as regards their actual forms and their position in relation to the architectural effect of the structures.

It is believed that historical lectures of this kind may have a distinct practical bearing upon the work of young architects in

their profession, and that from the great examples of the past they may learn lessons of the highest value. The buildings of by-gone ages are not to be regarded as models to be copied by the architect of to-day, so much as examples of the successful carrying out of right architectural principles, which are essentially the same in every age. Such principles as that of the suitability of a building to its use and to its environment, of the necessity for clearness and consistency of plan, of the proper use of ornamentation, both as regards amount and position, of the suitable forms of decoration for various styles, with other principles equally important, are abundantly illustrated in the masterpieces of the past, and a study of these cannot fail to assist towards a habit of right thinking on these and kindred matters, on the part of the student of to-day.

## THE OGHAM INSCRIPTIONS OF WALES.

THE fifth of the course of Rhind lectures in archæology was delivered by Sir Samuel Ferguson, Q.C., on Monday afternoon. Dealing with the Oghams of Britain, the lecturer said that, although much less numerous than those of Ireland, they had, in almost every instance, the great advantage of being accompanied by Roman epigraphs, of which they generally were found to be echoes. It might, therefore, be affirmed that they belonged to a period subsequent to B.C. 56, and some of them might, on reasonable grounds, be referred to the period of Roman occupation ending in A.D. 410. Of the latter the most remarkable was that inscribed on one angle of the base of the Roman altar preserved at Laughar, in Glamorganshire. There was no doubt of the genuine character of the altar. Neither could there be any question that the characters were true Ogham, although letters *l* and *c*, with indistinct traces of some vowel notches, were all that could now be recognised. If a contemporary inscription, it put the use of Ogham in Britain back into the time of surviving Paganism, and greatly impaired the argument for its Christian origin, and it would be a somewhat forced assumption to say that it had been added by a later hand. Conjectures of that kind had been employed to rebut the presumption that Oghamic monuments marked with the cross belonged to Christian times. If, as he conceived, these were inadmissible, much more so would be the theory of the employment of a legend not having any Christian significance to sanctify a relic of Pagan worship. The Laughar altar should, therefore, in any philosophic examination of the question, be provisionally regarded as a self-evidencing Oghamic relic of the Pagan period. It was also, with one exception, the only British Ogham unaccompanied by a Roman context. Having noticed the Vitalianus inscription at Cwm Gloyn, near Nevers—which with the Roman epigraph seemed to import that Vitalian was a retired military servant of the Empire—and other Oghamic inscriptions in Pembrokeshire, Breconshire, and Carmarthenshire, Sir Samuel said all these indeterminate Welsh monuments, of which it could only be predicated that they were of possible Roman but not demonstrably of Christian times, were found in South Wales. One Ogham-inscribed monument only had been hitherto found in North Wales, and it belonged to the same category. Two others of a similar character were found in Devonshire, including the Fardel monument, now in the British Museum. The cross-signed Ogham monuments of Wales, which gave a presumption of Christian origin, were, he said, hardly less numerous than those not so distinguished, and in the palæographic point of view might claim an equal antiquity. On the Kenfigg stone, in Glamorganshire, were the essential parts of the legend—*Merlingi anmagi liana*. The designation of Merlin in Welsh tradition was *an map liana*, or the misborn son of the nun. He was the child without a father of the legend of Vortigern, the very head of Welsh esoteric mystical doctrine. He did not suppose that was his grave, but he held that the monument was later than the story of the Nun of Carmarthen, who founded the Druids of Vortigern, and that they must consider Ogham writing and the formula *magi* to have survived in Wales down to, at least, some time after the fifth century. Having described the Llywell monument—one of the most elaborately designed and decorated of all the British crosses—the lecturer said they could not look on these survivals of the Pagan taste, intermingling with the first efforts of art in Christian symbolism, without a strong conviction that the monument belonged to the very earliest age of Christianity in Britain, and that the much-discredited date of the end of the second century for the mission of Fagan and Dubric looked less improbable in the light of that lapidary record. It was difficult to understand how the formulas in use in these inscriptions were *magi*, *maccu*, and that so many of the proper names were Irish in aspect, unless on the theory of an Irish Celtic occupation of those parts of Wales and South Britain in which the monuments were found; and the fact of some such occupation during the second or third century was very strongly attested, both by Welsh and Irish authority of a high antiquity. If they accepted the theory of an identical speech in Ireland and Britain before the epoch of Cunedda, they must refer the Oghams, of which he had been speaking, to the fourth, fifth, and sixth centuries, although asso-



ciated with epigraphs which they had been taught to regard as two, three, and four centuries later in date. His own inclination was to accept the theory, and to admit that, *ceteris paribus*, a British claim to have imparted that kind of writing to the Irish would rest on reasonable probability. A greater than the palæographic difficulty must, however, be surmounted before they could say that Ogham was of British as distinguished from Irish origin, or *vice versa*. On the one hand, they might have been struck, in the Welsh examples, with the absence of scholastic trickeries. On the other, they would have noticed that they almost all presented their genitive name-terminations in the Latin *i*; and that such forms as the Irish *ias, as, os, o*, were absent. If they tried to estimate what time it took the *ias* genitive to shorten into *as* and *a*, or the *i* genitive to recede from the termination, and hide itself in the body of the word, as in *maic* for *magi*, they should find themselves demanding periods long behind the Roman advent; and must, in that case, give the prior use to the place in which these forms were found. But if these be not true inflectional forms, but only pedantic devices of the Irish carvers, the conclusion would be that Ogham writing, after its discontinuance in Wales, went on through several stages of a spurious refinement in the south of Ireland; and to that conclusion he acknowledged his own mind was at present the more attracted. The discontinuance of Ogham writing in Wales seemed to correspond in date with the reforms consequent on the mission of Augustine. Both in Wales and Ireland there had been great need of reformation. Gildas had drawn the British half of the picture in very dark colours; but with outlines too indistinct to give us more than an indefinite sense of vice and apostasy. The Irish hagiologists were also vague and unsatisfying; but they indicated substantially that there was something much amiss in the Irish church about the same time. Brigid had prophesied that evil teachers were to come who should overthrow doctrine and seduce almost all men; and her biographer, Cogitosus, declared that when King Ainmire, the reformer of the Bards, called in Gildas to restore ecclesiastical law, all, from the highest to the lowest, had lost the Catholic faith; while St. Hildagard, in her life of Desibode, showed the continuing belief in some great heterodoxy of the Irish of the sixth century, by representing them as having in many cases turned Jews, and in many relapsed into paganism. In that view of the two churches—both Ogham-using, and both under orthodox censure—they might, the lecturer thought, see the causes which in Wales led to the disuse of that kind of writing, and in Ireland to the disuse, also, of the graveyards of those who practised it.

### BUILDING IN AMERICA.

THE present year has been so far a busy one for the United States building trades, and real estate has fetched much better prices than during the last year. In most of the great cities the number of large houses and commercial blocks now being erected is very considerable, especially at Chicago, where at least 16,000,000 dols. per annum is being spent in this direction. St. Louis is being added to in the shape of residential houses, although in the city itself the building is limited more to small factories and retail shops. Cincinnati is laying out a good deal of money, and especially in renovations and repairs, of which about 40 per cent. of the work will consist. At Baltimore and Boston building is also active, in the former city of speculative two-storey houses for rental. New York is still indulging in the favourite tall structures—a doubtful taste, which does not find favour in Boston.

### HELLENIC SOCIETY.

AT a general meeting held at 22 Albemarle Street on October 23, when Professor C. T. Newton was in the chair, the Rev. Edmond Warre, Head Master of Eton, read a paper on the "Raft of Ulysses," as described in the fifth book of the Odyssey. By personal research and observation of modern processes of ship-building the writer had arrived at a clear idea of the construction of the raft in question, and set forth his conclusions in detail, illustrating them by two models of a raft and of an ancient axe and adze which had been made under his direction in the school of mechanics at Eton. Mr. Warre alluded to a striking confirmation of his theory which he had lately seen in the construction of certain flat vessels which are used at Portsmouth for raising heavy weights from the water. Mr. Newton, after thanking Mr. Warre for his valuable paper, reminded the audience that there existed in the British Museum two genuine fragments of ancient vessels—(1) a bronze figure-head from the Bay of Actium; and (2) a cross-beam from the floor of an ancient galley dredged up from the bottom of the Lake of Nemi. Professor Jebb considered that Mr. Warre's paper not only for the first time made quite clear the passage in the Odyssey, but also explained the poetical use of the term *σκηδία* for ships in general in a passage in the *Hecuba* of Euripides, because it showed that such a raft seen from land would really resemble a ship. Mr. E. A. Gardner read a paper on some armour and ornaments from Kertch, which were now in the new

museum at Oxford. After a description of the several articles, Mr. Gardner showed that the importance of these finds in the Crimea lay in the fact that, if not of Athenian handiwork, they were certainly of Athenian design, and so might be added to the comparatively scanty remnant of genuine Hellenic metal-work. In connection with the representation of a camel upon one of the ornaments, Mr. Newton pointed out that in a bronze found at Kameiros, and now in the British Museum, a man with an Assyrian cut of beard was seated upon a kneeling camel. This bronze, though possibly of Phœnician design, was found in association with other objects belonging to archaic Greek art. Professor P. Gardner, alluding to the complete and sumptuous way in which the results of these Russian discoveries were published, said that in this respect despotic Russia set a good example to free England.

### THE CORN EXCHANGE, IPSWICH.

THE lighting of the new Corn Exchange, at Ipswich, has not given satisfaction to the brokers who assembled in the building, and the Estate Committee of the Town Council accordingly sought the advice of Mr. Bellamy, architect, of Lincoln. The following report has been presented to the Committee:—

"Lincoln, September 26, 1884.

"Gentlemen,—In compliance with your letter, dated August 1, 1884, respecting the want of light in your Corn Exchange, I beg to say I have made a personal inspection of the building, and have the honour to report for your information. I am of opinion the complaint arises from the fact of the roof light being at too great an elevation from the object to be examined; besides, there is a cross or confused light occasioned by windows being placed on the south side and west end of the walls.

"From my experience after erecting over a dozen corn exchanges, I am of opinion your light may be improved (without injury to the general design), and to accomplish this I would advise the following:—

"First.—Exclude the prejudicial light and sun's glare from the south and west windows; this may be done by portable, light skeleton frames and felt being placed in the existing window recesses, yet retaining a slight recess, thereby gaining a large space or panel for advertising purposes or decorations. Approximate estimate, 35/.

"Secondly.—Remove the whole of the slates and plaster on the north side of the roof, also break out a larger opening in the north-west wall and substitute glass. Approximate estimate, 150/.

"Thirdly.—Reduce the height of north parapet wall within nine or twelve inches of the gutter bottom, so as to obtain all the light possible at the eaves of the roof. Whilst I have failed to see a detailed drawing of the roof (as to the construction), I am persuaded much valuable (north) light may be gained by the removal of the heavy wood purlins and intermediate rafters, substituting for the former rolled iron or a combination of iron and wood of small scantling and totally dispensing with the latter; these timbers have doubtless been introduced simply to correspond with the south side, which, from the nature of the covering, necessarily required more strength. Approximate estimate, 70/.

"I further suggest the removal of the mullions, transoms, and head of each north window (this can be done without injury to the reveals), and substitute iron sashes with large sheets of glass, by which a further increase of valuable light would be obtained. Approximate estimate, 110/.

"I have every reason to believe, if these suggested alterations are carefully carried out, the object you are seeking (as to light) will be greatly improved and appreciated by the merchants.

"The windows on the south side of the Exchange being useless, four additional private rooms (on the first floor) can with advantage be added to the existing offices (one to each), and so raise the external balustrade and lead flat roof, which I think would improve Little King Street front, and also prove remunerative.

"Your Exchange Hall being from 15 to 20 feet in height greater than any corn exchange I have built or seen (necessitated I suppose by way of making the undertaking more remunerative) does, in a great measure, account for the difficulty experienced by merchants in judging the quality of grain; if, therefore, the suggested alterations do not satisfactorily meet the difficulty, such can be overcome by the introduction of an intermediate floor, say 10 or 12 feet above the present floor level. This I have roughly worked out, and find it can readily be done by introducing an easy wide staircase on each side of the main entrance, by taking a small portion of the end of each shop, also sitting-room over. By this arrangement the space forming the inner lobby would be added to the Exchange, and each shop and office (next Little King Street) could have a store-room at the back with floor light from the Exchange. I cannot give estimate without preparing plans and sections.

"With regard to the ventilation, I find some patent system of heating and ventilation has been adopted. I therefore doubt not, if any little failure is reported to the patentee, matters would soon be put right, and anything suggested by me might prove detri-



mental to the apparatus; yet, in altering the windows before referred to, each might have a portion to open and shut at pleasure, and the like with ventilators in the gables.

"If the south side of the roof has not boarding and felt under the slates, I strongly recommend such being introduced, as it would exclude the heat and cold, and add greatly to the comfort of the hall in all seasons of the year, besides being beneficial in acoustic properties.

"In conclusion, I may say you have got upon your site a well-designed block of buildings, and your architect has evidently had a desire to do his best to make the same remunerative, and I venture to say if the suggested alterations are effected, you would have a first-class Corn Exchange.

"I am, gentlemen, your obedient servant,  
"P. BELLAMY."

It was resolved to exclude the light from the south and west windows of the Exchange by way of experiment, and to substitute glass for the slates and plaster in the three sections of the roof on the north side.

## THE AWARDS AT THE HEALTH EXHIBITION.

THE list of honours awarded by the international juries of the Health Exhibition has at length been announced. Altogether 1,432 names of individuals or firms appear, exclusive of those of recipients of the special prizes given by the Society of Arts. The total number of gold medals awarded is 278, of which 242 will be presented. The Society of Arts present 11 medals. The "Joint Stock" prize, a Society's gold medal, or 20%, for the best example of sanitary architectural construction (Classes 20, 28, 29, 30, 32), has been awarded to Messrs. Doulton & Co. The "Siemens" prize, a Society's gold medal, or 20%, for the best application of gas to heating and cooking in dwellings—Class 24—is obtained by Mr. Thomas Fletcher, for articles shown by Messrs. Deane & Co. The "Stacy" prize, a Society's gold medal, or 20%, for the best exhibit in Class 30 (objects for internal decoration and use in the dwelling, fittings, and furniture), by Messrs. Collinson & Lock.

The Exhibition gold medallists in Group 3 (the dwelling-house) are as follows:—

Class 20. Dwellings, models, and designs for the same, and specimens of buildings erected in the grounds. Fittings and accessories for dwelling-houses. Completely-fitted apartments.—Class 21. Water supply and purification. Meters, filters, water-fittings, cisterns, &c.—Class 22. House drains, their construction and ventilation. Sewer disconnection; sinks, traps, gullies; the disposal and utilisation of house refuse.—Class 23. Water and earth closets, ash closets, commodes, urinals, disinfecting powders and fluids, insect destroyers.—Class 24. Grates, stoves, kitcheners, ranges, boilers, &c., for domestic use. Apparatus for heating and warming, smoke abatement, &c.—Class 25. Ventilators, air inlets and outlets, cubic space of rooms, cowls, air straining and cleansing.—Class 26. Lighting apparatus—(a) electrical apparatus for illumination and domestic use, secondary batteries, electrolisers, accumulators, &c.; (b) apparatus for lighting by gas, gas producers, gas meters, gas fittings, chandeliers, &c.; (c) oil and other lamps, mineral oil, wax and other candles, vegetable and animal oils.—Class 27. Fire-prevention apparatus—extinctors, portable engines, domestic fire-escapes, &c.—Class 28. Materials for sanitary house construction—roofs, walls, damp courses, solid floors, damp-proof wall coverings, cements, &c.—Class 29. Materials for sanitary house decoration, non-poisonous paints and wall papers, floor coverings, washable decoration, &c.—Class 30. Objects for internal decoration and use in the dwelling. Fittings and furniture.—Class 31. Baths, bathing requisites, public and private wash-houses, washing apparatus, detergents, appliances for personal cleanliness, &c.—Class 32. Publications and literature, models, pictures, diagrams, &c., relating to Group 3.—Class 33. Machinery and appliances relating to Group 3.

Adams, Robert (20); Andreas, Theo. H. (India) (29); Banner Brothers & Co. (22), gold medal (22 and 25), three silver medals, and (22) bronze medal; Beck & Co. (21), gold medal (21 and 23), two silver medals, and (21) three bronze medals; Benham & Sons (20); Birch, George H. (20 and 52), two gold medals; Birmingham Sanitary Association (22); Bowes, Scott & Read (22); Boyd, David O. (24); Bradford, T. & Co. (31 and 33), two gold medals, and (22 and 23) two bronze medals; Brown & Green (24), gold medal (20), silver medal, and (24) bronze medal; Broxburn Oil Company (26); Burke & Co. (30); Cacheux (France) (20); Calvert, F. C. & Co. (23), gold medal, and (31) silver medal; Candy & Co. (28), gold medal, and (22) two bronze medals; Capper, Son & Co. (22), gold medal, and (21) bronze medal; Chamberland, Dr. (France) (21); Chubb & Sons' Lock and Safe Company (Limited) (27), gold medal, and (20) silver medal; Cleaver, F. S. & Sons (31); Clements, Jeakes & Co. (31), gold medal, and (33) bronze medal; Cliff, Joseph & Son (20), gold medal (22 and 31), three silver medals, and (22 and 30) two bronze medals; Coalbrookdale Company (Limited) (21), gold medal (24 and 30) two silver medals, and (24) bronze medal; Collinson & Lock (30); Condry & Mitchell (Limited) (23); Crabtree Brothers (24); Craig, J. & M. (22), gold medal, (28) silver medal, and (22) bronze medal; Davey, Paxman & Co. (33); Decauville

(France) (20); Deane & Co. (24); Dent & Hellyer (22), gold medal, (21, 22, and 23) five silver medals, and (21) two bronze medals; Doulton & Co. (20, 21, 22, 23, 24, and 52), nine gold medals (21, 22, 23, and 30) fifteen silver medals, and (21, 22, and 24) five bronze medals; Dowson Economic Gas Company (Limited) (26); Durand-Claye (France) (23); Eagle Range and Foundry Company (24); Ebner, Joseph F. & Co. (Austria-Hungary) (30); Farmiloe, Thomas & William, (21) gold medal, two silver medals, and one bronze; Field, J. C. & J. (26 and 31), two gold medals; Galloway & Sons (33); General Gas Heating and Lighting Apparatus Company (Limited) (24); Geneste et Herscher (France) (23, 25, 35, and 41) four gold medals, (31A and B) silver medal, and (9) bronze medal; Glenfield Company (21), two gold medals, and (22) silver medal; Glover, George & Co. (26); Haibara, N. (Japan) (30); Hitchins' Fireproof Plastering Company (28); Improved Industrial Dwellings Company (20); Indestructible Paint Company (Limited), (29); Jackson & Graham (30); Jameson's Patent Cooking Company (24), gold medal, and (26) silver medal; Jeffery & Co. (20 and 30), two gold medals; Jennings, George (21, 23, and 31), four gold medals, (21, 22, and 23) six silver medals, and (22) bronze medal; Jones, Frederick & Co. (28); Keith, James (24), gold medal, (26) silver medal, and (12) bronze medal; Kent, George (21), gold medal, (20) silver medal, and (12, 21, and 26) four bronze medals; Kite, C. & Co. (25), gold medal, and (22) silver medal; Knight, John & Sons (31); Kutsutani, T. (Japan) (30); Lawrence & Co. (Limited) (21) gold medal and (12) silver medal; Le Grand & Sutcliffe, (21) one gold and one bronze medal; Lefevre, J., Belgium (29); Lyon, Washington, (23) gold medal, and (33) silver medal; Mackey, Mackey & Co. (23); McDougall Brothers, (23) gold medal, and (31) bronze medal; Maignen, P. A. (21), (31 A and B) two gold medals, (11 and 42) two silver medals, and (31) bronze medal; Manufacturers' and Millowners' Mutual Aid Association (22); Moule's Patent Earth Closet Company (23); Musgrave & Co. (24); Native Guano Company (Limited) (22); Nobel Brothers (26); Ota, M. (Japan) (30); Owen, Henry & Co. (23) gold medal, (23) silver medal, and (22) bronze medal; Parkinson, W., & Co. (26) gold medal, and (21) silver medal; Porter, John H. (21), gold medal, and (33) silver medal; Price's Patent Candle Company (Limited), (26 and 33) two gold medals, and (31) silver medal; Quirk, Barton & Co. (21) gold medal, and (28) silver medal; Rimmel, E. (31) gold medal, and (23) silver medal; Rottmann, Strome & Co. (29) gold medal and (30) bronze medal; Rowe & Co. (31); Salmon, David (31); Sanitary Appliance Company, (23) gold medal, and (20) bronze medal; Schaeffer, F. (Belgium) (24 and 35) two gold medals; Shanks & Co. (21 and 31) two gold medals; Sharp & Co. (21), gold medal, (22) silver medal, and (21, 22, and 25) four bronze medals; Simmons & Tullidge, (33) gold medal, and (45) bronze medal; Simpson & Co. (21); Spencer, J. (21); Starkie, Gardner & Co. (30); Steel & Garland, (24) gold medal, (24) silver medal, and (30) bronze medal; Stidder, J. G., & Co. (22) gold medal, (21 and 23) two silver medals, and (21, 22, and 23) seven bronze medals; Stones, John (20); Sugg, W., & Co. (Limited), (26) gold medal, and (24) silver medal; Thompson, H., & Co. (29); Thompson, Henry, Canonbury (24); Treutler & Schwurtz (Germany) (25); Tubouchi, A. B. Ya (Japan) (30); Tylor, J., & Sons, (21 and 31) three gold medals, (21 and 23) two silver medals, and (21, 22, and 23) eleven bronze medals; Yamamoto, S. (Japan) (30); Yates & Co., (29) gold medal, and (30) silver medal; Wadsworth, Henry & Son (22); Waller, Geo., & Co. (22) gold medal, and (22) bronze medal; Walton, F., & Co. (30); Wardle & Co. (30); Warner & Ramm (30); Warner, John, & Sons, (21) gold medal, (21 and 23) three silver medals, and (21 and 23) three bronze medals; West Central Sanitary Engineering Company, (22) gold medal, (21, 23, and 31) five silver medals, and (23) two bronze medals; White, William, Abergavenny (28); Wilcock & Co. (20 and 30) two gold medals, and (20 and 22) two silver medals; Wilkes Metallic Flooring and Eureka Concrete Company (28); Woollams, William & Co. (29); Willesden Waterproof Paper and Canvas Works (Limited), (20 and 29) two gold medals, and (30) silver medal.

## LEGAL.

### High Court of Justice, Oct. 28.

(Before Mr. JUSTICE MATHEW.)

COLEMAN v. GITTINS.

ARCHITECTS' CERTIFICATES.

This was an action to recover the balance alleged to be due on a building contract, and one point raised was of interest. The contract, which was made in August 1883, was to erect part of the refrigerating apparatus for the South London Fish Market. By the contract payments were to be made at the rate of 80 per cent. on the value of the work done as it proceeded, and the balance was to be payable in two months after the architect should have expressed his satisfaction with the completion of the work. By another clause of the contract the final balance was not to be payable until the architect should have given his final certificate. By a letter in September 1883 the architect expressed his satisfaction



with the work, but the final certificate was not given until January 1884, and the action was commenced within two months of the delivery of the final certificate.

His Lordship was of opinion that the intention of the parties, as expressed by the contract, was that the satisfaction of the architect was to be expressed by his final certificate, and that as the action had been commenced before the expiration of two months from the delivery of the final certificate the defendant was entitled to judgment. The defendant, however, had not paid the amount at all, and His Lordship said that as the defence was technical and devoid of merits he should direct that the judgment be entered without costs.

**Court of Session, Edinburgh.—Outer House.**  
(Before LORD ADAM.)

SIR ALEX. JARDINE v. HOPE JOHNSTONE AND OTHERS.

In this action Sir Alexander Jardine, of Applegarth, Bart., sought to have the heritors of Applegarth and Sibbaldie, Dumfriesshire, interdicted from removing from the parish church of Applegarth the gallery, which he was entitled to occupy with his family, and from interfering with it when making the necessary repairs on and reseating the church. He further sought to have the respondents ordained to restore the gallery so far as removed by their orders. For the repair of the church estimates had been accepted to upwards of 1,000*l.*, a third of which falls upon Sir Alexander Jardine. The repairs did not include any structural alteration of the fabric, but were principally alterations on the roof and the raising of the level of the floor, the latter involving the heightening of the gallery. It had been suggested that the complainer should bear the expense of heightening the gallery, but as he did not desire any alteration he refused to incur any individual liability. The heritors, however, resolved to remove the gallery, and in these circumstances the complainer made the present application, pleading that he was entitled to interdict, that the gallery had been allocated by his predecessors, and had been possessed by them and himself from time immemorial. The respondents allege that the beams and part of the gallery were going to decay and entirely unfit to be used again, and that it had always been their intention to re-erect the gallery according to plans agreed on by the complainer himself and the other heritors; and that the cost of taking it down and re-erecting it is the only matter in dispute; and that consequently the action was unnecessary.

The Lord Ordinary closed the record, and continued the case to allow of parties arriving at an extra-judicial settlement.



**The Decoration of the Dome of St. Paul's.**

SIR,—I shall be glad to be allowed to enter a little more into detail than I did in your issue of the 18th ult.

It is clear, I think, that in deciding upon the character of the decorative treatment of the dome, the key must be sought in the work actually existing, and which will always exist. What—described in general terms—is this?

First, at the base, there are eight great piers and eight great arches, surmounted by an unbroken cornice sweeping over the tops of the arches, and marking, in a striking manner, the curve and vast dimensions of the dome. Then comes the drum or wall, in which the twenty-four windows are placed, divided by pilasters on its periphery into thirty-two equal parts. Above this is another unbroken cornice crowning all these details of Wren's architecture, and marking distinctly, and with an unbroken line, the base of the dome. Now, if there be one principle of architectural design in all this more striking than another, it is horizontality. Once free from the piers at the base, the determination of the great architect to get as soon as possible to straight unbroken horizontal lines is perfectly obvious. The first cornice is unbroken. The curve of the drum is interrupted only where absolutely necessary for light—for the twenty-four windows. The surmounting cornice is unbroken. And in consequence of the circular plan of these details, they all mark in the most effectual manner the grand sweep of the dome. Wren seems to have been determined to avoid vertical interruptions, seems to have been anxious to make the periphery of his majestic dome the striking feature. And he succeeded. If, then, this is a correct general description of the existing design below the dome which it is intended to decorate, we are in a good position to ask—What should be the character of the decorative treatment of the dome itself?

For my own part, it seems strange to think of a lofty vertical arrangement, such as is proposed, surmounting this—in principle—almost Greek design. I cannot think that anyone whose opinion would be entitled to consideration would hesitate to say that the horizontal principle of treatment should be continued upwards to

the very crown of the dome; that the decoration of the dome should be in zones, and that the attempt to imitate solid architectural construction (as in the proposed vertical ribs) should be abandoned. Such vertical lines as are necessary might be very subdued, and should plainly indicate their purpose of dividing the pictorial subjects by being purely ornamental. Ancient and modern examples are abundant. There are the beautiful borderings of the Nasoni mausoleum, Raphael's frescoes at the Vatican, Peruzzi's at the Farnesina, and many others. Delaroche's great hemicycle at Paris is without marked vertical divisions, although the subjects embrace centuries of time. The work of Sandro Botticelli, recently placed in the National Gallery, is an example of the arrangement of a circular zone on the flat, and history records the sensation it created after it was first exhibited. And although on the dome of St. Peter's at Rome there are vertical ribs, they are so subsidiary as not to interfere with the zones of prophets, of apostles, and of the heavenly host. Under these circumstances I venture to think that if the attempt to connect the dome with the architectural details below it by means of sham architectural ribs were abandoned, a better result would be secured. There would be greater scope for artistic treatment on a grand scale—a scale suited to the distant point of view on the floor below.

I am, yours faithfully,  
AN OLD ARTIST.

**Commercial Arbitration.**

SIR,—In connection with the late Arbitration Conference held under the auspices of this Chamber, I would ask your permission to state one or two facts with a view of informing the commercial public as to what machinery has been provided by the London Chamber for the more satisfactory and rapid settlement of disputes by arbitration.

In the first instance, an agreement of reference has been carefully prepared after consultation with the most experienced solicitors and counsel, which will, I have every reason to believe, render awards absolutely binding. Under this agreement the London Chamber of Commerce only consents to exercise its jurisdiction when both parties agree, under its by-laws, to make the award a rule of court of the High Court of Justice. This stipulation renders it impossible to upset the arbitration award on the merits of the case itself, but only if the procedure of the arbitrator or arbitrators, or the conduct of the case, should prove to have been in any way faulty. It will be the particular function of the Arbitration Committee of the Chamber to watch that no such faulty procedure shall be possible.

The second important step taken by the Chamber to provide machinery for arbitration cases, has been by the nomination (by its various trades' sections) of the leading members in the principal branches of trade, to act as arbitrators for cases arising in matters connected with their particular specialities. Lists of arbitrators have now been compiled by the Textile, Chemical, Leather, Coal, Printing, and allied and West African Trade Sections, and there is every reason to believe that the other sections of the Chamber will, on the recommendation of the Council, provide similar lists.

It will thus be possible for the first time for disputants in commercial cases to select arbitrators or umpires from a list of nearly one hundred names connected with the largest and most respected firms in the City of London. The by-laws of the Chamber provide for the most rapid action immediately upon the signing of the Agreement of Reference by both parties, and the costs of the Chamber are merely nominal. The arbitrators' fees, also, are as low as is consistent with the employment of first-class and independent experience.

There is thus every reason to believe that the commercial community have now at their disposal, if they choose to avail themselves of it, a reliable, cheap, and rapid means of satisfactorily terminating business disputes.

I am, dear sir, yours faithfully,  
RICHARD MURRAY, Secretary.

The London Chamber of Commerce (Incorporated),  
84-85 King William Street, E.C.:  
October 23, 1884.

**WORKS IN PROGRESS.**

**Messrs. Oldis Bros.**, builders, of 20 Finsbury Pavement, and 35 Wilson Street, Finsbury Square, are rebuilding the extensive organ factory close to St. Pancras Station.

**The American Elevator Company**, 38 Old Jewry, E.C., have just received an order from Messrs. Elliott Bros., Sydney, N.S.W., for the erection in their new warehouses of a large goods lift of the "Standard" hydraulic pattern, which is to run from the basement to the fourth floor, a distance of over 60 feet, and capable of lifting 20 cwts. in addition to the weight of the cage. The lift is to have the same safety appliances as are attached to the passenger machines, so that the workmen may ride up and down with their load with perfect safety.



**A New Illuminated Four-Dial Turret Clock**, with the Cambridge or Westminster chimes, and five large bells, have been supplied and fixed in the new town hall, Hyde, Cheshire, by Messrs. William Potts & Sons, clock manufacturers, of Guildford Street, Leeds. The clock and bells were formally set going by the donor, Mr. Joshua Bradley, of Godley, on Saturday last. The opening day was observed as a general holiday. Mr. Bradley's gift adds greatly to the appearance of the fine building, which has been erected by Messrs. Beaumont, architects, of Manchester.

### NEW BUILDINGS.

**Airdrie.**—The Airdrie Working Men's Reading and Recreation Rooms having been found insufficient, the club have decided on building new premises in Broomknoll Street. The plans have been prepared by Mr. George Arthur, architect. The new premises will comprise a billiard-room for six tables, a large reading-room, and committee and janitor's rooms, as also three bath-rooms. The building will extend 106 feet back, and will have a frontage of 52 feet.

**Extension of Newcastle-on-Tyne.**—The new town at the west end is progressing, and about a hundred houses are completed or nearly completed. They are built in flats, according to specifications insisted upon at the time the ground was sold to the contractors. Each upstairs flat is divided into four rooms, and there are three rooms to each lower flat. The bricks of which the houses are composed are made on the spot by Mr. A. Murray. With the machinery at his command, he can turn out in a week about 80,000 bricks. These, by arrangement with the architect, are sold at the rate of 22s. per 1,000 to the contractors. Up to the present time about 18,000 superficial yards have been sold for the purpose of building, and besides this, 2,000 are reserved and virtually sold. The estate was laid out by Mr. William Glover, architect, 16 Market Street, Newcastle-on-Tyne.

### CHURCH BUILDING AND RESTORATION.

**Abbotskerswell.**—The parish church of Abbotskerswell, about two miles from Newton Abbot, has been reopened after restoration, which has cost about 1,400*l*. The contractors for the work were Messrs. Luscombe & Son, of St. Sidwell's, Exeter, and the architect was Mr. W. Butterfield.

**Blackburn.**—The corner-stone of St. Barnabas Church was laid on Saturday last by Mr. Randle F. J. C. Feilden, of Witton Park. The church comprises chancel, nave, side aisles, transept, clergy and choir vestries, and, owing to the fall of the land, a large parish-room has been provided under the chancel. The works have been let to Messrs. Marshall & Dent, of Blackburn. The tender of Messrs. Mercer Bros., of Blackburn, has been accepted for the hot-water apparatus. The number of sittings, which are all free, is 722, and the amount of the contracts is upwards of 6,000*l*. Mr. Varley, of Blackburn, is the architect.

**Derby.**—The foundation-stone of the new church of St. Barnabas has been laid. The architect is Mr. A. Coke Hill, and the builders are Messrs. Walker & Slater. The total length will be 138 feet, and the width 61 feet, and accommodation will be provided for 726 persons. Only the nave and aisles will be erected at present.

**Northampton.**—St. Crispin's Church, built for the shoe operatives of Northampton, has been opened. The work has been carried out by Messrs. Reynolds & Son, of Derigate, Northampton, from the plans of Mr. M. H. Holding, A.R.I.B.A., Market Square. The exterior walls are of rich brown Northamptonshire stone and Westwood Bath stone dressings. The lower portion of the interior of the edifice is finished in fine chopped-face Duston stone, and the whole of the upper portion plastered and prepared for a scheme of decoration in figure-work illustrating the life of St. Crispin.

**North Tyne.**—Birtley Church, North Tyne, has been reopened after restoration. The total cost of the work executed has been 1,300*l*. Mr. Arthur B. Plummer, A.R.I.B.A., of Newcastle, is the architect; Mr. William Welton, of Birtley, the contractor for the masonry, &c.; and Mr. William Knox, of Consett, for the carpentry. The east end has been rebuilt. A new rose window has been inserted in the west end. The reredos, communion rail, choir pews, pulpit, &c., are in oak; the nave pews in pitch pine, varnished. The old flat ceilings have been removed, and a pitch pine moulded panelled vaulted roof, with trefoil piercings, inserted. During the work an aumbrey and many other ancient remains were discovered. The original church dates from about 1100, and the sash windows of more recent years have been replaced by triplet Early English windows. The tiles in the chancel have been laid by Messrs. W. B. Wilkinson & Co., of Newcastle, and the ironwork is by Mr. Smith, of Hexham. The former barn-like outline of the building has been broken by terminal crosses, footstones, and buttresses.

**Skelton-in-Cleveland.**—This church, which was commenced in 1881, has been completed at a cost of nearly 15,000*l*. It consists of nave, with north and south aisles, choir, chancel, organ-

chamber, and vestry. The style is Early English. The walls are composed of hammer-dressed freestone, principally obtained from a local quarry, the south front, the windows, doors, piers, and arches, being of freestone, from a quarry at Glaisdale. The expense of the building has been met by money in the hands of a Building Committee, arising from the sale of church lands and subscriptions. Mr. J. T. Wharton has defrayed the cost of the tower.

**Stoke Newington.**—The church of St. Andrew, which has been erected for the use of a new district, has been consecrated. The building is Early English in style, and consists of nave, transept, with a hollow recess in lieu of chancel. Mr. A. W. Blomfield, M.A., is the architect.

**Sunderland.**—The new chapel, entrance lodge, and gates at the Southwick Cemetery, near Sunderland, have now been completed, from the designs and under the superintendence of Mr. H. T. Gradon, architect, of Durham. The whole of the works have been carried out by Messrs. Walter Scott & Son, contractors, of Sunderland, at a total cost of 1,544*l*.

### GENERAL.

**M. Antonin Proust** is likely to be appointed Commissioner-General for the National Exhibition which it is intended to hold in Paris in 1889.

**An International Exhibition** is proposed in Edinburgh, to be held during the summer of 1886.

**Mr. Ruskin** states that he has not seen the water-colour drawings which have been found in Exeter and are ascribed to Turner.

**The Executive Committee of Truro Cathedral** report that since February a sum of 11,500*l*. has been promised, but that nearly 9,000*l*. more will be required to complete the transept, lantern, stage, clock-tower, and other works, as payments have been made in excess of the estimates to the amount of 5,000*l*.

**The Art Collections** in the Corporation Galleries, Glasgow, have been again in danger of destruction, owing to a fire in a baker's shop which forms a part of the premises. The loan collection, which includes the Bute pictures, is worth 120,000*l*.

**An International Chalcographical Society** is in course of formation, its aim being to promote the scientific study of the history of engravings. Application for membership may be made to Mr. Thibaudeau, 18 Green Street, S.W.

**Mr. G. R. Strachan**, who has been for a short time surveyor in Chiswick, has been appointed surveyor of Chelsea, in succession to Mr. Stayton. There were eighty-two candidates.

**The Prince of Wales** proposes to lay out about one hundred acres of his estate at Roche, near Padstow, in building plots. They will be disposed of on such terms that everyone desirous of building will be able to erect a house and make it a freehold.

**The Surplus** left after paying expenses at the Health Exhibition is expected to amount to 30,000*l*., or double the sum left by the Fisheries Exhibition.

**The Manchester City Council** on Wednesday decided to invite the British Association to hold its meeting for 1886 or the following year in Manchester.

**The Manchester Architectural Association** opened its tenth session on Wednesday evening by a conversazione in the Memorial Hall. A number of drawings contributed by members of the Association were exhibited. There was a large attendance of members and their friends.

**The Value of Property** erected within the burgh of Greenock during the past year has been 95,000*l*., as compared with 87,000*l*. in 1882-83.

**The Blackpool Town Council** have resolved to recommend electricity as the motive power for the new tramways about to be laid on the promenade.

**The Esk Viaduct**, which carries the new line of the Scarborough and Whitby Railway over the river Esk, is practically completed. The viaduct, which is constructed of red brick, is 913 feet long and 125 feet high, with twelve piers and thirteen arches of an average span of 60 feet.

**The New Liverpool Waterworks** have cost during the past three months as follows:—The Llanwddyn embankment, 20,158*l*., or a total of 246,855*l*.; the quarry cost 9,281*l*. in the same period, or a total of 84,327*l*.; the aqueduct 32,178*l*., or a total of 519,957*l*.; and the land and easements 554*l*., or a total of 230,560*l*., making a grand total of 1,081,700*l*. 19s. 7d.

**The Construction** of the first street cable-tramway in Scotland is just about to be begun on the north side of Edinburgh, where the gradients are very steep. The continuous wire cable will be about six miles in length.

**Messrs. W. B. Wilkinson & Co.**, granite concrete paviors, of Newcastle and London, announce that Mr. W. D. Curzon, of 5 Westminster Chambers, S.W., who has been their agent for the last few months, is no longer a representative of their firm.

**Messrs. Archibald Smith & Stevens**, of Queen's Road, Battersea, have just completed a new hydraulic cylinder and crane for Southwark Wharf, Bankside. This forms another set of machinery worked in connection with the Hydraulic Power Company's mains.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, NOVEMBER 1, 1884.

### EDITORIAL NOTICES.

*The authors of signed articles and papers read in public must necessarily be held responsible for their contents.*

*No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.*

*Correspondents are requested as much as possible to make their communications brief.*

*The space we can devote to Correspondence will not usually permit our inserting lengthy communications.*

### TENDERS, ETC.

\* \* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

\* \* Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—  
“Contract Supplement to THE ARCHITECT.”

### COMPETITIONS OPEN.

**BOMBAY.**—Nov. 6.—The Municipal Commissioner of Bombay invites Designs and Estimates for a New Municipal Hall and Offices, which must be sent to his Office by Twelve noon, on Nov. 6. A Premium of 5,000 rs. will be given for the Design most approved of by the Commissioner, with the assistance of a Committee of the Corporation; 3,000 rs. for the second, and 2,000 rs. for the third. The total cost of the buildings is not to exceed 5 lacs (5,00,000 rs.). Mr. E. C. K. Ollivant, Municipal Commissioner's Office, Bombay, or at Messrs. E. W. & R. Oliver, 1 Corbet Court, Gracechurch Street, London.

**SOOTHILL.**—Nov. 6.—Plans are Required for a Board School proposed to be Erected in Gregory Street. Mr. J. D. Good, Market Place, Dewsbury.

### CONTRACTS OPEN.

**ACTON.**—Dec. 2.—For Construction of (Contracts 1 to 5) Main Sewers, Effluent Outfall Sewer to Thames, &c. Mr. C. Nicholson Lailey, Engineer to the Local Board, Acton.

**ALLOA (SCOTLAND).**—Nov. 14.—For the Construction of a Goods Station for the Caledonian Railway Co. Messrs. Crouch & Hogg, C.E., 175 Hope Street, Glasgow.

**BOMBAY.**—Nov. 14.—For Masonry and Excavation of Wet Dock (25 acres area), to include Wharf Walls (7,750 feet), Sea Entrance, &c. Mr. J. A. McConnochie, C.E., Engineer's Office, Surrey Commercial Docks, Rotherhithe.

**BOURNEMOUTH.**—Nov. 1.—For the Erection of a Bazaar. Messrs. Kemp-Welch & Pinder, Architects, Bournemouth.

**BRADFORD.**—Nov. 1.—For the Erection of a Post Office. Postmaster, Bradford.

**CARLOW.**—Nov. 10.—For Building Market, Town Hall, and Offices. Mr. William Hague, Architect, 62 Dawson Street, Dublin.

**CHELSEA.**—Nov. 4.—For Extension of Infirmary Laundry. Mr. Wm. Miller, 250 King's Road, Chelsea, S.W.

**COVENTRY.**—Nov. 10.—For Building Two Houses. Mr. W. Langley, Architect, 18 Smithford Street, Coventry.

**EALING.**—Nov. 3.—For Erection of Public Baths. Mr. C. Jones, C.E., Local Board Office, Ealing.

**EVINGTON.**—For Building Mission Hall and School. Mr. W. S. Burton, Architect, Berridge Street Chambers, Leicester.

**EXETER.**—Nov. 1.—For Completion of Rebuilding St. James's Church. Mr. R. Medley Fulford, Architect, The Close, Exeter.

**FROME.**—Nov. 3.—For Construction of Outfall Sewers (4,500 yards). Mr. Philip Edinger, Engineer to the Local Board, Frome.

**FULSTOW (SOUTH LINCOLN).**—Nov. 3.—For Erection of Farmhouse, Offices, and Engine Shed. Mr. E. W. Farebrother, A.R.I.B.A., Victoria Chambers, Grimsby.

**GILLINGHAM.**—Nov. 3.—For Foundations of Assembly Rooms and Offices. Messrs. Margetts & Co., Architects, Medway Priory, New Road, Chatham.

**GRANTOWN.**—For Building Church. Mr. John Smith, Factor's Office, Grantown, Strathspey, N.B.

**HACKNEY.**—Nov. 27.—For Construction of Brick Sewers (20,950 feet). Sir J. Bazalgette, Engineer, Metropolitan Board of Works, Spring Gardens, S.W.

**HALIFAX.**—Nov. 11.—For Building Wesleyan Mission Room. Mr. J. Farrar, Architect, Crossley's Buildings, 29 Northgate, Halifax.

**LEKLEY.**—Nov. 4.—For Extension of Hospital. Mr. C. H. Hargreaves, Architect, Bank Street, Bradford.

**KIDWELLY (WALES).**—Nov. 1.—For New Roof and Repairs to Church. Mr. J. Shankland, Bridge Street.

**KING'S LYNN.**—Nov. 5.—For Erection of Stables, Provender Stores, &c., for the Urban Sanitary Authority. Mr. E. G. Mawbey, Borough Surveyor.

**KING'S LYNN.**—Nov. 5.—For Building Stables, Provender Stores, &c. Mr. E. G. Mawbey, Borough Surveyor, King's Lynn.

**LEEDS.**—Nov. 6.—For Erection of All Hallows Church, Hill Top, Burley. Messrs. Adams & Kelley, Architects, Imperial Buildings, Bond Street.

**MARGATE.**—Nov. 13.—For Building Retort-house and Coal Stores. Mr. H. E. Jones, C.E., Gasworks, Harford Street, Stepney, E.

**MILLOM (CUMBERLAND).**—Nov. 1.—For Erection of Six Cottages in New Wellington Street. Holborn Hill Industrial and Co-operative Society, 29 Albert Street, Milloom.

**NETHER BUCKIE (SCOTLAND).**—Nov. 8.—For Erection of New Buildings. Messrs. Bruce & Sunderland, Architects, Banff and Buckie.

**NEW SWINDON.**—Nov. 10.—For Building Lecture-hall and Vestries. Mr. Baker, Architect, 38 Regent Street, New Swindon.

**NORTHAMPTON.**—For Building Villa Residence in the Avenue. Mr. Edmund Law, Architect, Abington Street, Northampton.

**NOTTINGHAM.**—For Building Board School for 960 Children. Messrs. Evans & Jolley, Architects, Wheelergate, Nottingham.

**OPORTO.**—Dec. 15.—For Construction of Covered Market. Senor J. A. Correa de Barros, President of the Municipal Board of Oporto, Portugal.

**PENRHIVCEIBER (WALES).**—Nov. 5.—For Erection of Infant School for the Llaawanno School Board. Mr. M. Cole, Architect, Pentrabach, Pontypridd.

**ROMFORD.**—Nov. 4.—For Construction of Concrete, Brick, and Pipe Sewers, Engine House, &c. Messrs. Brundell, Simmons & Brundell, C.E., 1 Prince's Street, Doncaster.

**SOUTHSEA.**—Nov. 3.—For Construction of Bridge near Wrexham. Mr. R. Lloyd Williams, County Surveyor, Denbigh.

**ST. LEONARDS-ON-SEA.**—Nov. 10.—For Building Bridge over Railway on the Filsham Estate. Messrs. Elworthy & Son, Architects, London Road, St. Leonards-on-Sea.

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VAUXHALL.—Nov. 10.—For Building Factory, Stores, Cellars, &c., Bond Street. Messrs. Hilton & Rawlings, Architects, 3 Victoria Street, S.W.

WADHURST.—Nov. 5.—For Additions to Buckhurst Lodge. Mr. H. M. Caley, Architect, Broadway Chambers, Tunbridge Wells.

WALTHAM ABBEY.—Nov. 3.—For Construction of Dwarf Boundary Walls, Paths, and Surface Drains in the Cemetery. Mr. C. W. Wiggs, Surveyor, Waltham Abbey.

## TENDERS.

### ABERDEEN.

For Building Church at Pennan. Messrs. Ellis & Wilson, Architects. Quantities by the Architects.

Gray, Portsay, mason.

Anderson, Johnshaven, carpenter.

Pivie, Aberdeen, slater.

Duncan, Newfutey, plasterer.

Duthie, Turfiff, plumber.

Barrow & Son, Woodside, painter and glazier.

### BARMOUTH.

For Erection of Masonic Hall, Barmouth. Mr. THOMAS ROBERTS, Assoc. M. Inst. C.E., Portmadoc.

Jones, Arthog . . . . . £1,300 0 0

Jones & Lloyd, Portmadoc and Criccieth . . . . . 1,189 0 0

Jones & Edwards, Barmouth . . . . . 1,180 0 0

Jones, Portmadoc . . . . . 1,135 0 0

Roberts & Evans, Portmadoc and Harlech . . . . . 1,047 0 0

Hughes, Portmadoc . . . . . 1,017 0 0

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\* Accepted subject to a slight modification.

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For Providing and Fixing Heating Apparatus, at Stonyhurst College.

METCALF & DILWORTH, Preston (accepted).

### BRENTFORD.

For Road and other Works, for the Brentford Local Board. Mr. F. W. LACEY, Surveyor, 62 High Street, Old Brentford.

Found, Bow Road . . . . . £2,327 0 0

Aldred, Strand-on-Green . . . . . 2,108 0 0

Everett, Kensington . . . . . 2,062 4 7

Griffiths, Kingsland Road, E. . . . . 2,036 0 0

Cooke & Co., Battersea . . . . . 2,030 0 0

Tomes & Wimpey, Hammersmith . . . . . 1,940 0 0

Nowell & Robson, Kensington . . . . . 1,939 0 0

Ball, Chiswick . . . . . 1,932 0 0

Harries, Shrewsbury . . . . . 1,900 0 0

Peil & Sons, Bromley . . . . . 1,892 0 0

MOWLEM & Co., Westminster (accepted) . . . . . 1,878 0 0

Adams, Moorgate Street . . . . . 1,795 0 0

### CHATHAM.

For the Construction of Roads, Luton Road Estate of the National Liberal Land Company. Mr. GEORGE POOLEY, Surveyor, 21 Charing Cross, S.W.

Chafen, Rotherhithe . . . . . £875 0 0

Nicholls, Wood Green . . . . . 875 0 0

Trueman, South Hackney . . . . . 865 0 0

Carter, Aneley . . . . . 842 0 0

ADAMS, Moorgate Street (accepted conditionally) . . . . . 747 0 0

### CHESTERTON (CAMBRIDGESHIRE).

For Building Ten Houses, Chesterton Estate, for Mr. W. Wagstaff. Mr. H. T. MILLS, Architect, Cambridge.

Unwin . . . . . £1,296 10 0

MILLS, Chesterton (accepted) . . . . . 1,233 0 0

### CLAYTON GREEN.

For Additions to Heating Apparatus, St. Bede's Presbytery, Clayton Green.

METCALF & DILWORTH, Preston (accepted).

### DARLSTON.

For Sewage Works (Contract No. 1), Darlston. Mr. E. PURCHARD, C.E., Engineer.

FIRMSTONE BROS. (accepted) . . . . . £930 0 0

### DEWSBURY.

For Enlargements and Alterations at Workhouse Infirmary, Dewsbury. Mr. ARTHUR A. STOTT, Architect, Heckmondwike. Quantities by the Architect.

Chadwick & Sons, Staincliffe . . . . . £1,000 0 0

### GLASGOW.

For Works for the Clyde Bridges Trustees, Replanking Portland Street and M'Neill Street Suspension Bridges. LIGHTBODY (accepted) . . . . . £145 10 9

For Repairing Causeway and Tram Rails on Glasgow Bridge.

A. & J. FAIRL (accepted) . . . . . £354 9 2

For Painting Portland Street and M'Neill Street Suspension Bridges.

PATON (accepted) . . . . . £111 5 0

### GLASTONBURY.

For the Erection of a Public Hall, Museum, and Literary Institute, at Street, near Glastonbury, Somerset, for Mr. William S. Clark, Greenbank Street. Mr. GEORGE J. SKIPPER, Architect, Opie Street, Norwich. Quantities by the Architect.

Merrick . . . . . £3,797 0 0

Pollard . . . . . 3,753 0 0

HAWKINS (accepted) . . . . . 3,675 0 0

### ELLER CARR.

For Spinning and Combing-shed at Eller Carr, Cullingworth, for Messrs. Greenwood & Co. Mr. J. B. BAILEY, Architect. Quantities by the Architect.

Turner & Foulds, Keighley, mason and brickwork.

Rushworth, Stanbury, joiner's work.

Barrett, Eastburn, ironwork.

Thornton, Brixley, slating.

Hird, Keighley, plastering.

Lambert & Sons, Haworth, plumbing and glazing.

Lonsdale, Keighley, painting.

### KIDDERMINSTER.

For Building Club-house, Park Butts, Kidderminster, for Mr. D. W. Goodwin. Mr. J. M. GETHING, Architect, Kidderminster.

Binnian & Son . . . . . £2,075 0 0

Howard & Sons . . . . . 2,009 0 0

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Bradney & Co. . . . . 1,799 0 0

Guest . . . . . 1,775 0 0

Dorse & Son . . . . . 1,728 0 0

BATE (accepted) . . . . . 1,630 0 0

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For the Erection of Committee-rooms, Class-rooms, and Caretaker's Apartments (Contract No. 2), Homerton. Mr. E. WIRY, Architect. Quantities supplied.

STIMPSON & Co. (accepted) . . . . . £1,539 0 0

For Construction of Sewers, Gullies, &c., in Eastcheap.

Cook & Co. . . . . £2,130 0 0

Schofield . . . . . 2,117 19 8

Webster . . . . . 1,995 0 0

Bell . . . . . 1,985 0 0

Adams . . . . . 1,898 9 0

Killingback . . . . . 1,820 0 0

Ford & Everett . . . . . 1,770 0 0

MOWLEM & Co. (accepted) . . . . . 1,692 0 0

Mayo . . . . . 1,691 12 6

For Erection of Premises at Limehouse for the London and County Banking Company. Mr. ZEPH. KING, Architect.

Rider & Son . . . . . £8,158 0 0

Higgs & Hill . . . . . 7,884 0 0

Johnson . . . . . 7,880 0 0

Shurmer . . . . . 7,488 0 0

Bush . . . . . 7,320 0 0

Holloway Bros. . . . . 7,298 0 0

Boyce . . . . . 7,275 0 0

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Marshall, Brighton . . . . . £2,440 0 0

Val de Travers Co. . . . . 2,031 15 0

Cooke & Co. . . . . 1,853 0 0

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Bradshaw & Co. . . . . 1,293 1 8

SOCIÉTÉ FRANÇAISE (accepted) . . . . . 1,165 0 0

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Cooke & Co. . . . . 1,966 13 3

Harris . . . . . 1,898 0 0

Mowlem & Co. . . . . 1,884 13 9

Mayo . . . . . 1,725 10 0

Wheeler & Hindle . . . . . 1,719 6 8

E. & H. Bevers . . . . . 1,671 5 0

MARSHALL, Brighton (accepted) . . . . . 1,641 16 4

For Heating Presbyterian Church, St. John's Road.

BACON & Co. (accepted).

For Heating Sunday Schools and Lecture Hall, Brondesbury.

BACON & Co. (accepted).

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F. & F. J. Wood . . . . . 8,514 0 0

W. & F. Croaker . . . . . 8,482 0 0

Goodman . . . . . 8,473 0 0

Oathwaite & Son . . . . . 8,466 0 0

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Kirk and Randall . . . . . 8,115 0 0

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Jerrard . . . . . 8,069 0 0

Johnson . . . . . 8,034 0 0

Atherton & Latta . . . . . 7,995 0 0

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### Sherbrooke Road.

Wall . . . . . £222 0 0

Woollams . . . . . 190 0 0

### Webb Street.

Howell & Son . . . . . 160 0 0

Ewart & Son . . . . . 143 10 0

### Chatham Gardens.—Cleaning House, &c.

McCormick & Son . . . . . 8 18 0

Pritchard & Son . . . . . 8 15 0

Lower Chapman Street.—Raising Wall of Playground.

Sargeant . . . . . 38 10 0

Atherton & Latta . . . . . 38 0 0

Coombe . . . . . 22 18 0

### Manchester Road.—Waterclosets and Urinals.

Robey . . . . . 443 0 0

Limu . . . . . 375 0 0

Cox . . . . . 330 0 0

Atherton & Latta . . . . . 305 0 0

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For New Fittings at the Black Dog Public-house, Shoe Lane, Fleet Street, E.C. for Mr. Taunton. Mr. H. I. NEWTON, Architect, 17 Queen Anne's Gate, Westminster.

Heath . . . . . £122 0 0

Warne . . . . . 102 0 0

HELLINGS (accepted) . . . . . 99 18 0

For Alterations to the Town Hall Tavern, Hammersmith, for Messrs. Acton, Phillips & Sons. Mr. H. I. NEWTON, Architect, 17 Queen Anne's Gate, S.W.

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Warne . . . . . 579 0 0

Lamble . . . . . 665 0 0

Cook . . . . . 525 0 0

WALKER (accepted) . . . . . 449 0 0

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For Building Residence, Castle Street, Luton, for Dr. D. Thomson, M.D. Mr. W. J. PEARSON, Architect.

Smart Bros. . . . . £2,073 0 0

Spencer . . . . . 1,995 0 0

Dunham . . . . . 1,985 0 0

Neville . . . . . 1,895 0 0

For Building Residence, Brook Street, Luton, for Mr. C. Alexander. Mr. W. J. PEARSON, Architect, Luton.

Spencer . . . . . £517 0 0

Slough Bros. . . . . 610 0 0

Neville . . . . . 501 0 0

Smart Bros. . . . . 497 0 0

Dunham & Son . . . . . 498 0 0

Parkins . . . . . 473 0 0

Saunders . . . . . 454 0 0

J. & J. Sear . . . . . 434 0 0

Lissainan . . . . . 400 0 0

For Alterations and Additions to Premises, Bute Street, Luton, for Mr. Charles Mees, J.P. Mr. W. J. PEARSON, Architect, Luton.

Parkins . . . . . £638 0 0

Dunham . . . . . 885 0 0

Spencer . . . . . 870 0 0

Slough Bros. . . . . 860 0 0

Smart . . . . . 857 0 0

Neville . . . . . 853 0 0

### SHEPTON MALLET.

For Building Sexey's County School at Douling, Shepton Mallet, Somerset, for the Visitors of Hugh Sexey's Hospital, Bruton. Mr. GEORGE J. SKIPPER, Architect, Norwich. Quantities by the Architect.

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Jones & Co. . . . . 2,963 0 0

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For new Workhouse at Mitcham, for the Guardians of the Poor of the Holborn Union, to accommodate 1,000 inmates, and with Administrative Offices for 1,200 inmates. Messrs. H. SAXON SNELL & SON, Architects, 22 Southampton Buildings, London.

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Kirk & Randall, Woolwich	64,034	0	0
Gabbutt, Liverpool	61,495	0	0
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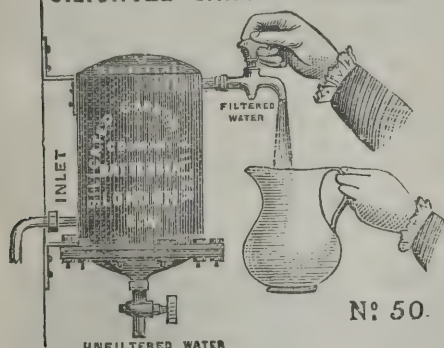
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For Building Villa Residence, Tredegar. Mr. CHARLES TAYLOR, Architect, 22 Duke Street, Cardiff. Quantities supplied.

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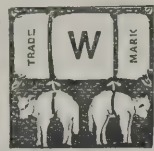
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"Yours, &c.

"JAMES WEIR, F.R.I.B.A.

"To Mr. Grundy."

"Baptist Chapel, Clapham Common, London. Richard Webb, Pastor, 10 Grafton Square.

"February 15, 1884.

"DEAR MR. GRUNDY,—I have pleasure in testifying to the excellency and efficiency of your patent Fire-Grate. It is the most charming invention for heating a large room I have ever known. I shall have pleasure in showing it to anyone who wish to have their schools or rooms pleasantly and efficiently heated."

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# BELL'S ASBESTOS.

## BELL'S ASBESTOS FLOORING FELT.

This article is manufactured from specially prepared Asbestos fibre, and by its use any building can be rendered comparatively fireproof at a very small cost. This material should be used as a substitute for brown paper under the carpet, and it can be taken up and relaid as often as required; it may be laid between the flooring boards, on the ceiling before plastering, and on the walls. Doors of pine or other wood should be so constructed as to have a sheet of the felt in the centre, so that either side being burned the other remains intact. In houses so protected fires would be localised to the rooms in which they originate. Asbestos felt, being a non-conductor of heat, is superior to any other sheathing, and used under slates has no equal. It yields no dust, lies quite flat, is soft to the tread, and its low cost places it within the reach of everybody. Made in rolls of 36 inches wide.

## BELL'S ASBESTOS BOILER AND PIPE COVERING COMPOSITION

for coating every class of steam pipe and boiler. Non-combustible, and easily applied when steam is up; adheres to metals and preserves them from rust; prevents the unequal expansion and contraction of boilers exposed to weather; covers 50 per cent. more surface than any other coating, and is absolutely indestructible. It can be stripped off after many years' use, mixed up again with 20 per cent. of the composition is supplied dry, and only requires to be mixed with water to the consistency required for use.

A horizontal boiler, 17 ft. 6 in. long, 15 H.P., gave the following results:—

Temperature on Plates .. .. .	186 deg.
“ “ Covering .. .. .	94 “

One ton of coal was saved per week, and, although the fire was raked out every evening 20 lbs. of steam were in the boiler next morning.

The following testimonial refers to this covering:—

Offices of Wimbledon Local Board, Wimbledon, Nov. 23rd, 1883.  
Dear Sir,—It may interest you to know that we save exactly 40 per cent. in fuel through using your covering.—Yours truly,  
W. SANTO CRIMP, C.E., F.G.S.

**BELL'S ASBESTOS PAINT**, for floors, stairs, and all interior woodwork, to prevent the spread of fire. This paint is especially useful in cotton mills, and in fact in all factories and buildings exposed to risk from fire. It is quite free from poisonous ingredients, and is both easily and cheaply applied. Bell's Asbestos Paint has, on several occasions, done great service in preventing the loss of life and property. The great fire in Buchanan Street, Glasgow, in November last, produced the following testimony to the value of this material:—

Offices of the *Glasgow Herald*, the *Weekly Herald*, and the *Evening Times*, Glasgow, Nov. 14th, 1883.  
Mr. John Bell,  
Sir,—As one of the means that helped to save our buildings extending from Buchanan Street to Mitchell Street from the recent great fire, I think it fair to say that your Asbestos Paint, which was applied to the outside hoist of the *Evening Times* case-room and other portions, gave valuable proof that it materially aided in resisting the flames from the immediately adjoining tenement while the fire was rapidly destroying it and threatening us in the most serious form. Since the fire, and to assure myself further of the value of the Asbestos Paint as a fire-resister, I placed a piece of wood, with your paint put on more correctly than in our case, into one of our furnaces, with the result that it was brought out without a fibre of the wood being touched, while similar pieces of wood, thrice coated with Irish Lime, at once got into a flame.—Yours truly,  
(Signed) ALEX. SINCLAIR.

**BELL'S ASBESTOS SASH-LINE CORD** is unaffected by heat and damp, and renders unnecessary the use of metallic wire and chains. Ropes made in the same form have great tensile strength, and being indestructible by fire are of incalculable value for fire escapes.



## BELL'S ASBESTOS.

The goods of this house are of the highest quality only, and no attempt is made to compete with other Manufacturers by the supply of inferior materials at low prices. All orders must be sent direct to the undermentioned depots, and not through agents or factors.

**BELL'S ASBESTOS AND INDIA-RUBBER WOVEN TAPE AND SHEETING** for making every class of steam and water joint. It can be bent by hand to the form required, without puckering, and is especially useful in making joints of man-hole and mud-hole doors on boilers; also for large "still" joints, where boiling fat and steam have to be resisted. It is kept in stock in rolls of 100 feet, from 1/4 in. to 3 in. wide, and any thickness from 1/4 in. upwards. Manhole covers can be lifted many times before the renewal of the jointing material is necessary. The same material is made up into sheets about 40 in. square, and each sheet bears the trade mark, without which none is genuine. It is very necessary to guard against imitations of this useful material, and to secure themselves against being supplied with these less useful articles at my price, users are recommended to see that every 10-ft. length of the Asbestos Tape purchased by them bears the trade mark.

**BELL'S ASBESTOS CEMENT** for the backing of firebricks and furnaces. The use of this fireproof material saves the expense and annoyance occasioned by the repairs so constantly required in the firebricks and kitchen ranges of private houses. Any labourer accustomed to handle other cements can apply this.

**BELL'S ASBESTOS BOILER PRESERVATIVE**.—This useful mixture, by absorbing the free oxygen that is in the water, entirely checks pitting and corrosion. It also disintegrates incrustation so immediately as to prevent its adhering to the plates. Not only is a great economy of fuel effected by keeping boilers clean, but the risk of having the plates burned is thereby obviated. It has been computed that 1-16th inch thick of incrustation causes a waste of 15 per cent. of coal; 1/4 inch thick, 60 per cent.; and 1/2 inch, 150 per cent. Thus the Preservative avoids the great risks which are inseparable from scaled plates, lengthens the life of a boiler, and covers its own cost a hundredfold by economy of fuel. It is entirely harmless, and has no injurious action on metals. It can be put into the feed tank or boiler, as may be most convenient. Sold in drums and casks bearing the trade mark, without which none is genuine.

**BELL'S PURE ASBESTOS CLOTH**, for protection against the spread of fire. Iron curtains warp, and in the great emergency of fire will often be immovable. Asbestos cloth, being incorruptible, will remain strong and flexible for an indefinite period, and will stay the progress of a fire and the passage of smoke longer than any other known material. This cloth is also extensively used in Maignen's unequalled water filters, for which a gold medal and diploma of honour were awarded by the Special Commission appointed by Her Majesty's Government to receive the reports of the International Juries at the Fisheries Exhibition. By special arrangement with Mr. Maignen, his filters for houses, factories, and towns are supplied by this firm.

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**BELL'S ASBESTOS FUEL** for gas fires. This genuine Asbestos Fuel is composed of the finest hand-picked Asbestos, and its weight is about half that of any other Asbestos fuel.

**BELL'S SPECIAL LONDON-MADE ASBESTOS MILLBOARD**, for dry steam joints, made of the best Asbestos fibre, is well-known for its toughness and purity, and is absolutely free from the injurious ingredients frequently used to obtain an appearance of finish, regardless of the real utility of the material. Made in sheets measuring about 40 in. square, from 1-64th in. to 1 in. and 1/2 millimetre to 25 millimetres thick. Each sheet bears the Trade Mark.

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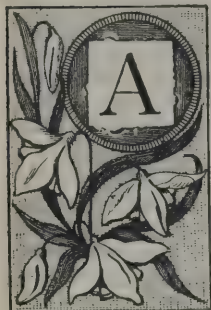
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Saturday, November 1, 1884.



# The Architect.

## THE INSTITUTE OF ARCHITECTS: THE PRESIDENT'S ADDRESS.



NEW session of the Royal Institute of British Architects was opened last Monday evening with the usual presidential address. The meeting was well attended, and the presence of two distinguished visitors had been very appropriately secured as chief speakers upon the usual vote of thanks, namely, Mr. SHAW-LEFEVRE and MR. MITFORD, the First Commissioner, that is to say, of Her Majesty's Public Works, and the Secretary of the same department.

Mr. EWAN CHRISTIAN, as President for the year, may be said to represent two principles; privately he is one of the few survivors of the last generation of Gothic enthusiasts who are still in earnest; while publicly he is identified with the desire to administer professional affairs on liberal and perfectly sincere grounds, without any prejudice to his own Gothic feeling, of course, but without any compromise of his sense of impartial duty. Accordingly, on this occasion the assembly had the double pleasure of listening to a sound and sensible inaugural address upon the policy of the Institute, and hearing afterwards an excellent defence of the late Mr. STREET against whatever objections might be made, or might be supposed to be made, against the design of the Law Courts.

The defence of Mr. STREET came about in this way. Mr. SHAW-LEFEVRE, in a remarkably common-sensible speech which he made after the conclusion of the President's address, and in which he "turned a good many awkward corners" with great dexterity, happened to suggest a hope that the selection of the Classic style for the new Admiralty and War Offices would be acknowledged to fall in with the public taste of the moment, seeing that only four or five out of more than a hundred and twenty designs sent in by the profession at large were of a Gothic type. This led him to go on to observe that the Law Courts might perhaps prove to be the last effort of the Gothic revival, referring of course to its secular or municipal as distinguished from its ecclesiastical form. No one could blame Mr. CHRISTIAN for taking up such a challenge with all that remains now of the old militant spirit of his order. Cynics may probably say that the admissions he so frankly made to the disparagement of the arrangements of the edifice left only one thing more to be done to consummate the acknowledgment of its failure, and that his doubtful expression of a hope that some future generation might appreciate the merits which the present is too dull to discover was that one thing; but be this as it may, the latest apology for the Law Courts is at least a generous one, and an honest.

In dealing with the position and prospects of the Guild of Architecture of which he is for a time the official head, Mr. CHRISTIAN adopted a simple course. Just fifty years ago it was founded. The objects in view, as he well said, were excellently set forth and accounted for in the charter. As an instance of the carelessness and apathy which had since prevailed amongst men who ought to know better, he himself had never till now read that charter. But something at least had been done during the last half century in the way of a vague fulfilment of the founders' aspirations; and there was now being developed an intelligent desire to do a great deal more. Fifty years ago the provisions for academical study were of little account; libraries there were virtually none; there was no professional press; no publication of current designs; little indeed of professional fraternity; and still less of artistic liberty. Now there are Royal Academy classes, University classes; weekly newspapers rivalling each other in the profuse display of illustrations and the earnest discussion of affairs; libraries of value, and one of the very greatest value; prizes, medals, and travelling scholarships, whose practical utility it is not easy to overrate; almost too large a variety of professional societies; and withal an individualism of artistic merit and of style which may be called the boast of our generation and our country. The question then is what we are to do with all this; and the answer is that we have resting upon us a peculiar responsibility to do more than we appear to think.

Mr. CHRISTIAN is sanguine about the obligatory examination for the Associates of the Institute; indeed he is one of those who would extend the application of the test—under judicious restrictions, he is careful to say—to the Fellows. At the same time his fancy is not to be led away by the showy policy of ultra-academical education in France. In one word, he is a practical man. Pupilage, here and there so much contemned, he regards to be the strong point of our English system. In early youth the scholar of the art attaches himself to an acknowledged master, and grows up in the practical acquisition of his manner and the gradual discovery of his mysteries. He studies elsewhere in the abstract; at the Royal Academy, at college classes, in architectural societies, in the library, and in the press. In due time he travels, and of course sketches profusely; and then at length (for this is the worthy President's plain meaning) he enters upon a career of competition and fights his way to fame—to a happy combination, that is to say, of the airy trumpet and the substantial leg of mutton. There is one thing, however, adds the President in his kindly but candid way, which is essential to success upon this principle, and that is "genius." No doubt this is the fact, provided we put not too fine a value upon so fine a word. At any rate, most English architects of experience will for the present be disposed to believe that a good office may turn out a better architect than a good *atelier*, if everything else be only as it should be.

The ordinary meetings of the Institute, Mr. CHRISTIAN seems to think, are not sufficiently lively. He would have sprightly papers read by the younger men, and free and easy debate thereon especially encouraged. But in this he surely forgets himself a little in his excess of liberality. The aim of such an association—a Royal Institute of Architects—ought to be very different from this. It is not a debating club for young men at all; but an artistic and scientific or "learned" society, to which the very best men, in the plenitude of their skill and experience, are to bring from day to day the best of intelligence and ripest of wisdom, for consideration on the highest ground. Insufficiently as this great purpose may now be served, it is the sense of how it ought to be served that, as a rule, keeps the younger members silent. One can imagine them waiting with appreciative patience for better pabulum, even when they scarcely hope to receive it. The quaint regulation which is from time to time referred to for mere pecuniary purposes—that a new member is expected either to supply a paper or pay a donation to the library—is not only a shabby and sordid artifice, but, far more seriously, a perversion of intellectual principle.

Great reforms are in contemplation at the Institute. Amongst other demonstrations of a radical character, the Associates have been in some odd way encouraged to meet together and memorialise for "a share in the management of affairs." The Council, whose hair we nevertheless may suppose to stand on end, have set a special committee to work, in communication with the honorary solicitor, to reconsider the terms of the charter of WILLIAM THE FOURTH, and to entertain the idea of procuring a new charter. It was but the other day, as we noted at the time, that a recommendation to permit provincial Fellows merely to vote in writing was almost discourteously scouted by the Council; now it is proposed, not only that this should be allowed, but that the Associates as a body shall vote with the rest. Truly the times are changing; and perhaps it is not more than the strict truth to suggest that as the times change the Presidential influences change. Revolution, Mr. CHRISTIAN tells us, he detests, but judicious reform he favours to the utmost. It is high time, at any rate, that such sentiments should be expressed, and, if possible, acted upon. But one question, easily asked, and as we think no less easily answered, is this:—If the spirit instead of the letter of the old charter were acted upon, what need would there be for a new one? It is not the law that is wrong, but the new-fangled way of interpreting it.

The recent competition of designs for the Offices of War and Admiralty was made the subject of anxious explanations, not only by Mr. CHRISTIAN, as one of the adjudicators, but still more by the First Commissioner of Works, following him. The remarkable success achieved by "two young men, unknown to fame, who have scarcely ever been away from a small town in Yorkshire," was made much of. The determination to entrust to their professional charge a great national building was spoken of with confidence. The other young men at the back of the meeting-room cheered vociferously, and



their elders more in front had to join in the applause, if only for chivalry's sake. But, chivalry apart, what does this mean? It simply means that everybody is to rejoice because a great prize is won unexpectedly. Lotteries are illegal in England, and this is one of the many ways in which the love of hazard, native in all lands, delights therefore to find exercise. Far be it from us to grudge to Messrs. LEEMING personally the success they have so suddenly attained, but does not this very success itself illustrate the practical futility of architectural competitions? If Mr. NORMAN SHAW or Mr. WATERHOUSE had been the successful competitor, as Sir GILBERT SCOTT used to be, nothing would have persuaded the less thoughtful mass of the profession—and, indeed, of the outside public—to be satisfied with so unromantic a result; but if it had been Mr. NORMAN SHAW's clerk, or Mr. WATERHOUSE's pupil, or a schoolboy from the South Kensington Art Classes, the whole country would have rung with generous but foolish acclamations. The recent competition, says Mr. CHRISTIAN, is shown by its outcome to have been "absolutely and entirely fair." So be it; but there is this at least to be said:—If architectural skill is no better than a thing in which unpractised youth can enter the lists with age and experience of the best, and beat them hollow, then it is a pity it is not something in which such a catastrophe would be as impossible as it is in other professions. But, says Mr. CHRISTIAN, such competition is "inevitable in this age." Perhaps it is; but the rejoinder of many prudent persons in all walks of life will be—The more's the pity.

#### AUTUMN EXHIBITIONS.

THE fall of the leaf is again the signal for that show of pictures in some half-dozen galleries which greet the visitor with sights and associations of all seasons, under the magic sway of art, independent of changeful time. In the region of Pall Mall Messrs. WALLIS at the French Gallery, Messrs. McLEAN and A. TOOTH in the Haymarket, present an admixture of foreign and English productions as usual. A point is made at the French Gallery of the landscape of CARL HEFFNER, who has been commissioned by Messrs. WALLIS to paint a series of large compositions from Southern Italy. These, with a number of his delightful small sketches, fill the entirety of the long wall. HEFFNER has brought his Northern temperament into contact with the Southern sun, and it has remained unwarmed. These impressive tableaux of grand desolation, on the Appian Way, at Ostia, in the Campagna before the aqueduct of CLAUDIUS, at Baïæ, beside the Temple of VENUS—poetic, studious, scenic, as they are—differ no whit in tonality from the humid, chilly brilliance of those pictures of marsh pools and shaggy moorland and stretches of luminous shallow water, for which the artist has taught us to look with expectant pleasure. The skies, always a strong feature in the painter's programme, are here less eventful than usual, with the exception of that mustering in clouds over the Place of Tombs on the Via Appia. There is a fine passage in this picture, where the mass of pine and cypress foliage strikes the sky, and a low line of silver light runs quivering along the level horizon under the lifted cloud-curtain.

Probably, if translated into black and white, the moon-rise at Ostia, called *Desolation*, would come out the best in composition and balance, and the engraver might add a touch of texture and solidity to the pillars of JUPITER's temple which is wanting to all HEFFNER's treatment of masonry. The beautiful detail put into the distance in the large study on the Campagna is lost from the point of view at which the picture tells best as a whole. It is in management on points like this that the clever artist shows a lack of technical training. On the whole, we think that this Bohemian painter has been moved but not filled with the peculiar characteristics of Italian scenery. He has sought for aspects which had appealed to him, and which he has learnt poetically to portray under other skies, and his brush has obeyed the unconscious impulse of the mind to impress the old stamp on the new mould.

It is in this gallery that one meets with the masterly works of the Viennese Professor L. C. MÜLLER, and *Tric-trac Players in a Cairene Café* is one of his consummate studies. A certain artificiality of tone, and a lack of texture in the draperies out of keeping with the realistic treatment of the subject must be looked for, but the drawing and grouping of the figures are beyond praise for character, precision, and

picturesque appeal. The study of the young, long-robed attendant, superintending with Oriental dignity the boiling of his coffee-pots on a stone stove, is a complete picture by itself, delicious in colour.

Herr BRANDT, the Hungarian, is a famous man, and especially renowned for wild scenes of local custom, wherein horses and brilliantly-costumed figures are thrown together in a *mêlée* of violent action, after what might be called a learned hazardous fashion. *The Horse Fair in Bessarabia* is such an opportunity for displaying the painter's power, his abrupt, rather ragged, but masterly touch, command over difficult material. Perhaps he has not in this large canvas brought his separate and many groups so well together as sometimes; but very few men could give cohesion and a definite impression to this confusion over an extended perspective of struggling animals and gesticulating men, strange booths and sheds covered with fluttering draperies and thatch, gaunt windmills, and bare poles. The colour is a general tone of dusky browns and greys, upon which scintillate flicks and spots of brilliance.

A fresh incident of rustic life by Mr. W. H. BARTLETT, called *A Cornish Drying-ground*; further, an old canvas dating from the days when Mr. FRANK HOLL, A.R.A., painted pathetic *genre* on a large scale with dull tone and obvious means, *Want—her last Resource*, a married girl, with baby on her breast, pawning her wedding-ring; also a study of an *Oriental Water-Carrier*, in the romantic manner of the late A. ELMORE, R.A., are notable English pictures.

In the miniature *genre* for which the gallery has always been known, the exquisite bits by C. SEILER and ALLAN-SCHMIDT should be looked out. A decorative composition, in which the warm olive tints of a girl's skin, her blue drapery and the blue distant landscape, a red water-jug, the pearly whites of a fountain and open portico, and the silver white of blossoming trees, form a delicious if artificial scheme of colour, is by a Professor at Düsseldorf—not at Paris, despite of appearances—by name C. WÜNNENBERG.

Mr. McLEAN has gathered a brilliant and various roomful of Continental and British easel pictures. Among the former, the Spanish scenes by B. GALOFRE, busy, scintillating, full of *chic*, are very notable in the school of FORTUNY. Mr. BOUGHTON, R.A., is interesting and characteristic in the *Going to Church* of his young New England couple, mid brown leaves and snow; and yet more in the capital interior, with the incident of stalwart *Wouter van Twiller's Judgment*. Charming and fresh is an English girl, fair and slim in white draperies, standing at a window, entitled *The Betrothal*, a piece of gentle grace not altogether after the usual fashion of Mr. R. MACBETH's rather aggressive picturesqueness.

But the "feature" of the gallery is of course the exhibition of the three pictures of children, painted for Mr. WERTHEIMER by Mr. MILLAIS, R.A., and noted by us in our columns on the spring studios. *Little Miss Muffet* is to be engraved by Mr. ATKINSON, and must inevitably be a most popular print, although black and white cannot give the charm of her wonder-stricken blue eyes and sweet flesh tints. The Normandy fisherman child, who reads a *Message from the Sea* she has found in the bottle washed up on the strand, is pleasanter and more interesting than the young *Mistletoe Gatherer* in the snow. Both pictures have, of course, the painter's vigorous ease, and, be it said, some technical deliberation also.

The interest of Mr. TOOTH's exhibition, in so far as foreign art is concerned, rests much with the pictures of M. L'HERMITTE, who is not seen so often as a colourist as in the charcoal drawing for which he stands absolutely in the first rank. In these MILLET-like rustic subjects, the *Midday Rest* and *Harvest*, the artist grasps his subject matter in sterner manner than is his wont, but brings charm of atmosphere and significant intention to beautify and to ennoble. His oil technique is less happy than in coal or wash. The brilliant palette of LUIS JIMENEZ is in full sport in his *Competitions* at a flower show. VAN HAANEN and LEPAGE, and other men of note are represented, also the English sea painters BRETT and HOOK.

The Dudley Gallery Art Society, and the Nineteenth Century Art Society, are founded to meet the necessity of exhibitors whose productions outrun in quantity the capacities of the many galleries already in existence. The second named is supposed especially to encourage juvenile talent, and in so far as it is helpful (and the committee put forth a promising statement) one must wish the Society success. The



show of pictures is not enlivening, however. We noted for commendation in figures Mr. GOTCH, Mr. GUARDABASSI, Mr. YEEND KING (not a tyro), in outdoor *genre* Mr. ALFRED CONQUEST, in landscape pure STUART LLOYD, W. SIDNEY COOPER, of course not to the exclusion of others. Among the water-colours, clever Oriental studies by G. LEKEQUIAN, a bit of Swedish figure subject by LEON ZORN, the architectural essays of SOPHIE D'OUSELEY, again the landscape of Mr. LLOYD, and again an interior, this time with piquant French LOUIS QUINZE costumes, by YEEND KING.

At the Dudley Gallery certain assured artists are members, of whom some care to send, Mr. EDWIN ELLIS, for example; while others are conspicuous by absence. It would be unfair to miss noting the very great advance shown in the *News from the Sea*, by Mr. GOTCH, a picture of incident, with figures talking at the door of a house above the quay, while the wind blows furious up a narrow passage and fills the air with drift of foam and rain in the distance, where rows of watching figures tell the tale of ships struggling in an angry sea. HILDA MONTALBA'S Venetian sketches are pleasant if blurred images, very true in colour. A picturesque view, with children of *Truant Disposition*, loitering on way to school, by W. G. DAFFARN, has much promise and some performance; it is dainty in execution and picturesquely planned. Mr. BLOMFIELD shows vigour in single-figure studies. ALICE MILLER has looked at Mr. CLAUSEN'S work to good purpose before painting the strong girl's head—*Troubled Thoughts*. The exhibition, as a whole, can hardly be considered to rank as an indispensable event in the art season, but people who have much leisure will find ground on which to spend it pleasantly in this gallery.

### CAST IRON IN BUILDINGS.

IF any building material can be said to have fallen under a cloud it is cast iron. Unless in the form of columns and stanchions it is seldom used, or only when no material can be substituted. Cast iron is supposed to be treacherous, uncertain, incapable of sustaining tensile strains, liable to flaws which are concealed from all eyes, and equally puzzling to operators in the blast furnace and the foundry. How many of its defects arise from imagination may not at first sight be apparent. Constructive science is not without its prejudices, and a good many of them surround cast iron. Why that material should be slighted is easily explained. At the time when exceptionally large railway bridges were projected, a Royal Commission was appointed to inquire into the use of cast iron and wrought iron for the purpose. The risks arising from the vibration of cast iron caused by the constant passing of trains, and from the occasional derailment of a locomotive or a line of carriages, were considered, and it was supposed that cast iron in those contingencies was less suitable than wrought iron. The Britannia Bridge, on the other hand, made it plain that an immense structure could be constructed of plates and angle-irons with as much ease as a house was built of bricks, and of a strength that was equal to every reasonable test. The engineers of that bridge, STEPHENSON, FAIRBAIRN, HODGKINSON, and CLARK, became, as it were, the lawgivers on iron construction, and as they were supposed to be in favour of wrought iron exclusively, it was made the favoured material. A little inquiry would have shown that STEPHENSON, who was the chief among them, had no partialities. If he used wrought iron to cross the Menai Straits, in a no less remarkable work, the High-Level Bridge at Newcastle-on-Tyne, he gave the preference to cast iron. FAIRBAIRN, however, found it more convenient to undertake contracts for wrought-iron girders, and, as he was a rather productive writer, his literary influence was widespread, and was employed in advocacy of the material. Wrought iron was also supposed to offer more facility for designing new types of bridges, and in consequence a great many engineers were attracted by it. During the last thirty years very few cast-iron bridges of any importance have been erected in England, while the varieties of those in wrought iron are almost countless.

FAIRBAIRN was better known as a practical engineer in connection with mills than with railways, and as soon as, by a piece of sharp practice, he had patented a rivetted girder, he was able to introduce a great many of them into buildings. About the same time another influence came into operation against cast iron. In 1846 the carpenters of Paris organised a general strike, and architects and builders were in consequence

compelled to substitute iron for wood in floors and roofs. Various sections of rolled girders were tried, and eventually the I girder was evolved. The employment of one with a bearing of 18 feet in a house in the Boulevard des Filles du Calvaire, in Paris, about 1849, was among the most memorable events in the history of modern building construction, and cast-iron beams were henceforth superseded. They had been in use from 1801, when BOULTON & WATT arranged the ironwork for PHILLIPS & LEES' mill in Manchester.

There is no denying the convenience and advantages of wrought iron, whether in the form of rolled joists or rivetted girders. But let us be just to beams in the other material. When cast iron lost its position little was alleged about deficient strength or liability to collapse through invisible flaws. The experiments on it produced remarkable results. Thus, for example, it was ascertained by the Royal Commission on the Application of Iron to Railway Structures that when cast-iron bars were exposed to successive transverse blows, each blow producing one-third of the ultimate deflection (or deflection immediately before breaking), they bore four thousand such blows without having their strength impaired. It was likewise found that when bars of cast iron were exposed to successive deflections by means of a revolving cam, they bore one hundred thousand such deflections without any impairment of strength. These figures show that cast iron does not so readily succumb even under variable loads, which are frequently applied and removed.

The bridges which were constructed in days when wrought iron was not recognised as a building material are also evidence of the endurance of cast iron. The Coalbrookdale Bridge over the Severn, designed by ABRAHAM DERBY, was constructed in 1777. TELFORD'S bridge, near it, at Buildwas, was finished about twenty years afterwards, and his Waterloo Bridge at Bettws-y-Coed in 1815. The big Sunderland bridge, 236 feet span, dates from 1796, and bids fair to last long, although it is only the work of an amateur engineer. It was designed by the rebellious staymaker, TOM PAINE, and was originally put together at the Yorkshire Stingo in Lisson Grove. Southwark Bridge has sustained the wear and tear of metropolitan traffic from 1819. All those bridges are in positions which are exceptionally trying, and their existence is a refutation of the suspicions which some people have entertained respecting the strength of cast iron. If the material can withstand the variety of loads which pass over Southwark Bridge, and all variations of atmospheric condition, there need be no fear about its security within a building.

With such precedents, the Corporation of Middlesbrough may have full confidence in the fitness of cast iron to support the floor of their great hall, no matter how crowded it may be. Nevertheless a good deal of credit is to be given to Mr. HOSKINS for the experiment, which has been so well carried out by Messrs. DENNETT & INGLE. It would have been possible to have used wrought-iron beams for the purpose, but apart from questions of expense and headway, the appearance of the room must have been very different. Experience has shown that it is almost impossible to give an architectural character to rivetted or rolled girders. The utmost that can be done is to decorate them with painted ornament, or to perforate the web-plate with patterns. But cast iron is more tractable and lends itself to design. There is of course a risk that it can be made into forms which are more applicable to wood or stone, but in good hands there need be no want of fitness in the ornamentation. The material has been so little used, it is not surprising that occasionally there should be a doubt about the artistic treatment that is most appropriate to it. The late OWEN JONES did a good deal towards the creation of a style that was adapted to cast iron. He seemed to keep in view the crystalline nature of the material as a fundamental idea, and to have restricted himself to geometrical patterns which would be in keeping with extreme rigidity and power to resist compression. On the other hand, there are structures of cast iron which are so profusely ornamented with imitations of carving as to suggest only the ease with which the metal can be melted and run into moulds. The spandrels of railway bridges might be cited as examples which show that more was thought of the flowing curves of the "filling in" than of lines which might express construction.

It is not to be inferred from what we have said that we propose a substitution of cast for wrought iron in buildings. All we venture to imply is that both kinds of girders have their



uses, and that by restricting himself to horizontal beams in wrought iron the architect very often adds to his difficulties in his endeavours to produce effect; while cases often arise, like the Middlesbrough Town Hall, where cast iron demands a preference before all other materials.

### THE RIGHT TO THE ELGIN MARBLES.

THE evidence which was given by Mr. Newton in the treasure trove case in the Thames Police Court, appears to indicate that there are doubts about the title to property in the sculpture of the Parthenon, now in the British Museum. It is not impossible hereafter that a claim may arise for the restoration of the works, and that it may be made a subject of international adjudication. That England bought the sculpture from Lord Elgin for 35,000*l.* is plain, but whether it would be possible to satisfy a council of lawyers about the rights of the vendor is another matter. His lordship's account of the acquisition would not, it is to be feared, be in accordance with the strictest notions of equity. His ownership was the subject of investigation by a Parliamentary Committee, and in the end appears to have been taken on trust. Other nations have been enriched by artistic spoils, but England and Bavaria stand apart as purchasers of sculpture which was torn from the walls of temples. In order that a couple of galleries might be made more attractive two buildings must for ever lose the treasures which gave them character. It is not surprising that among Lord Elgin's contemporaries there were many who condemned his energy in bringing the marbles to England. Byron probably expressed what was a very general opinion in those days when he said that a man "adores the plunder, but abhors the thief." The question we have now to consider is whether the removal of the statues was plunder, for, if so, one's enjoyment of the Parthenon Room in the British Museum cannot be unalloyed. The history of the transaction must accordingly be given.

The Earl of Elgin was appointed ambassador to the Ottoman Porte in 1799. Before he left England his lordship appears to have entertained a belief that he could do something for the arts while absent. He consulted Thomas Harrison, the architect who designed the single span bridge over the Dee, St. Nicholas' Tower, Liverpool, and Lord Elgin's house at Broomhall. Harrison had lived for a few years in Rome, and his opinion was that drawings, however accurate, could not take the place of casts as a means of artistic education. Lord Elgin thereupon endeavoured to persuade the Government to appoint a staff of modellers, draughtsmen, and architects to produce copies and drawings of Greek work, but the ministers were afraid of the expense. His lordship was too poor to undertake the cost of engaging English artists, but in Italy he secured the services of Tita Lusieri, who was described by Byron as a painter of the first eminence; Signor Balestra, an architect, and an assistant named Ittar, together with a Calmuck figure-draughtsman and a couple of modellers. Permission was obtained for the artists to establish themselves in Athens, and for three years they were engaged on casts and drawings, Lusieri being the superintendent. The firman was drawn up during the absence of the Grand Vizier from Constantinople. This document is addressed to the *cadi*, or chief judge, and the *vaivode*, or governor, of Athens. As it forms the title-deed to the sculpture, it will be well to give the most important passage:—

He (Lord Elgin) hath also at this time expressly besought us that an official letter may be written from hence ordering that as long as the said painters shall be employed in going in and out of the said citadel of Athens, which is the place of their occupations, and in fixing scaffolding round the ancient Temple of the Idols (Parthenon), and in moulding the ornamental sculpture and visible figures thereon in plaster or gypsum, and in measuring the remains of other old ruined buildings there, and in excavating foundations when they find it necessary, in order to discover inscriptions which may have been covered in the rubbish, that no interruption may be given them, nor any obstacle thrown in their way by the *disdar* (or commander of the citadel) or any other person, that no one may meddle with the scaffolding or implements they may require in their works, and that when they wish to take away any pieces of stone with old inscriptions or figures thereon that no opposition may be made thereto.

It is evident that the pasha who drew up the firman did not contemplate any other work being done than the taking of casts of the sculpture. The "pieces of stone" must have meant something very different from the great frieze, the metopes, and the pedimental figures. Lord Elgin maintained that the firman was only expressed in general terms, because it was well understood

that a permission issuing from the Porte for any of the distant provinces was little better than an authority to make a bargain with the local authorities. A similar permission was given to other explorers, but from want of means they were unable to operate on the judges and governors. How far the statements are accurate it is now impossible to determine. Lord Elgin admitted that his original plan was to bring away nothing but casts, and the meaning of the firman as an authority to model and measure becomes clear. Afterwards, on seeing the indifference of the Turks to the sculpture, statues being sometimes converted into mortar, his lordship's intentions were altered, and a very liberal interpretation was given to the word "removal" in the firman. It is remarkable that no official information was given by Lord Elgin to the Turkish Government respecting the extent of his devastation. "The chance is," he said, "that I have done it five hundred times, but I cannot answer specifically when or how." A more extraordinary statement was never uttered by a diplomatist, unless it was when Lord Elgin said that he could not decide whether the permission was given to him in his capacity of ambassador or as a private collector. The terms of the bargain with the officials have never been known. Lord Elgin's agent said he was unable to conjecture the amount of the bribes, but he admitted the presentation to the *vaivode* of cut-glass lustres, firearms, and other articles of English manufacture.

From what we have said it will be seen that the entire transaction is surrounded by the indefiniteness which is always dangerous in a law case, and an ordinary tribunal would probably hesitate to accept the title on which England holds the sculpture. The English ambassador obtained privileges from the Grand Porte, which he chose to interpret as being a concession to Lord Elgin, the connoisseur. The Turkish officials at Athens were influenced by means of bribes in money and gimcrackery, and in consequence did not interfere. The high authorities in Constantinople, after the manner of an English circumlocution office, declined to know anything of the operations, as they had received no official information. It was easy for the Earl of Elgin, under those circumstances, to remove as much sculpture as he cared to possess. The real difficulties were those attending the voyage to England.

### ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE first ordinary meeting of the Institute was held on Monday evening, the President, Mr. Ewan Christian, in the chair.

#### Obituary.

The decease was announced of Mr. John Holloway Sanders, of Derby, on the 16th ult., in the 59th year of his age, elected a Fellow of the Institute in 1872. The death was also announced of the French architect, M. Paul Abadie, Hon. Corresponding Member of the Institute. This gentleman became an Architect Academician in 1875. He was Inspector-General of Diocesan Edifices, member of the Commission of Historical Monuments, and architect of numerous churches in Bordeaux, Angoulême, and Périgueux, and architect of the church of the Sacred Heart, Montmartre, Paris, chosen in the International Competition for that work.

#### Donations.

Professor Meldahl, rector of the Academy of Copenhagen, sent a folio work on 'Mediaeval churches and other historical monuments in Denmark.' Herr Schneider, of Berlin, the third part of his illustrated work on the "Decoration of Interiors," a work begun by the late Herr Gropius, Corresponding Member of the Institute. M. Ruprich Robert, the second part of his new work on Norman architecture. Other donations were also announced, and among them drawings and designs of the late Viollet le Duc reproduced in facsimile. M. Lucas sent a pamphlet with the proposed rules for an association of architects for the defence of professional interests in matters such as responsibility of architects, public competitions, artistic copyright, &c., an association the president of which was M. Questel, Senior Architect-Academician. It was proposed to establish a fund for affording pecuniary assistance in judicial and administrative cases.

On the motion of the President a cordial vote of thanks was awarded to the donors.

Professor Raschdorf paid a visit to this country during the recess. He was about to erect a new English church at Berlin, and the Crown Princess of Germany, the Princess Royal, sent a request that he might be assisted in his inquiries in London by some of our English architects. Accordingly the President, Mr. Gruning, Mr. William Simpson, and others accompanied in his various visits of inspection.



**Studentships and Scholarships.**

Mr. F. R. Farrow, the holder of the Godwin Bursary, had been kindly received in Vienna, and the objects of his visit forwarded by Herr Leonhardt, secretary of the Guild of Architects, and others, and among them Baron von Hausen, son of the late Baron von Ferstel, and Herr Schmidt, gold medallist of the Institute, who gave him every facility to study points of construction in some of the new barracks and a hospital.

The hon. secretary intimated that it had been decided that the Pugin prize should be accompanied by a medal, by way of giving the winner an enduring memorial of the honour he had taken, and the medal was in course of preparation. The Council thought it would add to the prestige of the Godwin Bursary if a medal were given with that also. Mr. Godwin had notified his acquiescence, and sent a cheque as his subscription towards the cost of preparing the die, and the amount of the donation would go a long way towards defraying the cost of the medal.

Miss Hannah Jane Jones, the only surviving relation of the late Owen Jones, had intimated her desire to establish a scholarship, the special object of which would be to enable the holder to travel in Europe and elsewhere for the cultivation and improvement of his knowledge of architecture, the scholarship to be tenable for two years, and to be designated the Owen Jones Travelling Scholarship; the nomination to be in the hands of the Council of the Institute, and the nominee to be a present or former pupil of some member of the Institute, or of the Professor of Architecture in University College, London, or Birmingham and Midland Institute, and to be deemed eligible by reason of his proficiency in the leading subjects treated of by Owen Jones in his "Grammar of Ornament."

On the motion of the PRESIDENT, a hearty vote of thanks was given by acclamation to Mr. Godwin and Miss Jones.

**Memorial of the Associates.**

Mr. RICHARDS JULIAN read and presented a memorial signed by the Associates to the following effect:—"We, the undersigned Associates of the Royal Institute of British Architects, desire respectfully to direct your attention to the fact that, although professional members, Associates under the existing charter and by-laws are debarred from taking any part in the affairs of the Institute, and to urge the following considerations:—Every step which renders our Institute more truly representative will add to its influence and popularity, and any change which improves the position of the Associates will add to the dignity of Fellowship. Moreover, the authority of the Council will be enhanced by making the electing body consist of all the professional members. It should be borne in mind that at present the Associates subscribe about one-half of the total amount contributed by professional members, and yet have no control over the expenditure. A large number of the Associates are actively engaged as principals, and are therefore equally interested with the Fellows in questions of professional practice. In the Institution of Civil Engineers, and in the Surveyors' Institution, professional Associates vote on the same terms as Fellows, and in these kindred societies the practice is found to work satisfactorily. We therefore most strongly urge you to determine the best method of giving to professional Associates the right of voting on all matters relating to the regulation of the affairs of the Institute, and suggest in the interest of country Associates that the votes be recorded by means of voting papers transmissible by post."

The memorial was signed by 453 Associates—viz., by 308 in London, and by 145 in other parts of the United Kingdom; and Mr. Julian explained that last year's list contained the names of 685 Associates, since which 25 had been elected, making in all 710. Of this number five had ceased to be Associates, some others were abroad, or had no address, and deducting these to the number of forty-five, 665 copies of the memorial were sent out. Some of these were returned through the dead-letter office, eleven for various reasons, not, however, because they did not sympathise with the objects of the memorial, declined to sign, and this left 90, from whom no reply had been received.

The PRESIDENT replied that it gave him great pleasure to receive the memorial, which should be laid before the Council at as early a date as possible. He sympathised with the wishes expressed by the Associates, but he would not anticipate what he had to say on the point in the address he was about to read.

**New Members.**

Mr. Josiah Conder and Mr. George Rackstraw Crickmay were elected Fellows, and Mr. Charles Harvey Henrich Cazalet was elected an Associate.

**The President's Address.**

The PRESIDENT then delivered the address, which will be found in another part of *The Architect*.

Mr. MITFORD, hon. member, and Secretary of Her Majesty's Office of Works, moved a vote of thanks to the President for his address, saying that owing to the absence of a more worthy member the task had fallen to him of asking them to thank their President for his extremely interesting and remarkable address. It was evident that they were to be congratulated on the flourish-

ing state of their affairs. The statements made by the secretaries showed that the Institute had a very long arm, and that men came to them from every quarter of the globe for their certificate fellowship. For a young institution, only just reaching its jubilee, it was no mean measure of success. There had been also read a long list of benefactions showing that men appreciated them, and were ready to back their appreciation in a solid way. The admittance of new members proved the Institute was alive. The examination for admittance was no dead letter, for the honour was obtained only by labour, and that of a most severe kind. The Institute might now indeed be said to confer a degree of an academical character. As to competitions, especially the recent great competition for the Admiralty and War Offices, alluded to by the President, perhaps he might be allowed to say it was a matter of great satisfaction to him to hear the well-deserved and graceful compliment paid to the young architects who had so suddenly and so unexpectedly come to the front as the winners. Mr. Mitford concluded his remarks by alluding to the satisfactory relations of the Office of Works with the Institute.

Mr. SHAW-LEFEVRE, First Commissioner of Works, spoke of the services rendered by the President of the Institute and Mr. Hardwick to the Government when acting as judges in the competition. Few, he said, knew the labour and the conscientious zeal they brought to the task of adjudicating in so important a matter. The competition had involved two novelties. In the first place, in previous competitions for public buildings architects had been asked to act as assessors, but not as judges. On the present occasion two eminent architects, the President and Mr. Hardwick, in connection with the Chancellor of the Exchequer, Mr. W. H. Smith, and himself, had acted as judges, and in this respect they would, he thought, agree that a proper and due position had been accorded to the profession. In the second place, it was the first example of a Government competition taking the form of a double competition—the first open to all the world but strictly limited in its nature—that was to say, to sketch designs from which a limited number were selected for a competition of a more elaborate character. The profession responded freely to the invitation, and no less than 128 designs were sent in, which were of a fairly representative character, and included a certain number of the most eminent architects in the profession, and the result of the competition was in itself a voucher for the complete fairness with which it had been conducted. No one was more surprised than they were themselves when they came to see the names of those whose designs they had selected. A primary condition was, he need hardly point out, that the buildings should answer the purposes they were intended to serve, and that the plan interiorly should not be sacrificed for exterior effect, and he might add that many who failed, failed on this account, and of course could not be recommended for the second trial. As to style, out of the 128 designs submitted, not more than five, perhaps only three, were Gothic. The rest were Classic designs, either of the more severe Classic, or various forms of the Renaissance. One was designed in the more recent style, which went by the name of Queen Anne. It was a significant sign of the change in public opinion, that in previous competitions, as for the Home and India Offices, more than half the designs were Gothic; and again, in the limited competition for the Law Courts, the greater number of designs were Gothic, and in both cases a Gothic design was successful. They might then conclude that it was a principle generally accepted by the profession that to answer the purpose intended and harmonise with the surroundings, Classic style was more suitable than Gothic for the new offices. The verdict of the judges had, on the whole, been approved of by the profession and by the public. It was the intention of the Government, in the coming session, to submit a vote to Parliament to employ Messrs. Leeming to carry out the work. In the meantime those gentlemen were occupied in perfecting as much as possible their design, partly in deference to suggestions from the authorities, partly from the criticisms they had received elsewhere. Speaking of Westminster Hall, he said it had been his duty to clear away the old courts which had hidden the west front of the Hall, and when that was finished there came the question of what should next be done, and he bethought himself of taking advice of the architect most competent in that kind of work, and plans were now before the public, prepared by Mr. Pearson, suggesting a restoration of the work as it was in the time of Richard II. to the beginning of this century, when the courts were added to it. This involved the building of a double-storeyed cloister against the west front of the Hall, by which it would be possible to preserve the old Norman wall which was full of antiquarian interest, having the marks of the Norman workmen still upon it. Whereas if the front were left exposed to the weather, the atmosphere of London would take effect, and it would be necessary to reface the wall and absolutely and for ever to conceal the old Norman masonry. Differences of opinion as to the expediency of the work had been expressed, and as they had been expressed also in the House of Commons, the question would be brought forward in Parliament, and it would then be possible for any one to challenge the opinions of the Committee. Another important work was being carried on at the Tower of London. This was a work of demolition and of restoration, first, in the removal of hideous warehouses and structures which had so long intercepted the view



of the Tower from the river, and secondly, in the restoration of the inner ballium wall and the Lanthorn Tower. One block of warehouses had now been demolished, and a part of the ballium wall rebuilt. He hoped to begin the other half of the work in a few days. The work, he thought it right to say, had been carried out by Mr. Taylor, of the Office of Works, who was a member of the Institute, and of whose ability and the high services he had rendered to the Government Mr. Shaw-Lefevre could not speak in too high terms. These works were, he thought they would agree, of no small importance. There was, he believed, no other city in Europe like London, where there was to be found so long and unbroken a series of great buildings, showing every phase that architecture had passed through, from the Norman work as seen in the old Norman fortress of the Tower, the Norman Hall at Westminster, the beautiful Abbey, illustrating Gothic ecclesiastical work from Henry III. to Henry VII., the Tudor domestic work of Holland House and Charlton, the Renaissance work of Inigo Jones, the masterpieces of Wren and his successors, down to Sir Charles Barry and Mr. Street, in whom we had possibly the end of the Gothic revival—in secular buildings at any rate, for he thought it possible that it might still flourish in ecclesiastical buildings. No one could venture to say what the style of our buildings would be, even in the immediate future. That style was not due merely to architects, but to the taste, or the want of taste, and the requirements of the public. Public opinion compelled Sir Charles Barry to adopt the Gothic style for the Houses of Parliament against his own conviction; and again it was public opinion, in the person of Lord Palmerston, that forced Sir Gilbert Scott to abandon his Gothic design for the Home Office, and to erect a Classic building. Public taste was itself the result of influences so subtle and numerous that it was impossible to analyse. Though the profession had suffered severe losses of late years by the deaths of so many of its prominent members, he believed it held within its ranks men who were able to carry on the great traditions of English architecture, and who would leave behind them memorials as beautiful and as valuable as those we had had left us in the past.

MR. CHARLES BARRY seconded the vote of thanks to the President. The architect's duty, he said, was with the present essentially, with the past historically, and perhaps uselessly with the future. In devoting themselves to their art they hoped to earn the praise of posterity even as they were ready to accord it to the past. In reference to Mr. Shaw-Lefevre and Mr. Mitford paying them the compliment of being present that evening, he said he believed those gentlemen, with the profession, were to be felicitated in regard of the fairest competition that had ever been conducted.

The PRESIDENT in acknowledging the thanks of the meeting, said he did not agree with Mr. Lefevre that the Gothic style showed signs of dying. That gentleman, however, would agree with him, that if a plan had been found equal in merit to that selected, with a fine Gothic elevation, it would have received the greatest consideration. He hoped those who had taken up the study of Gothic thoroughly, and could design with freedom and treat it as it ought to be treated, would not let themselves be deterred from its practice by what the First Commissioner of Works had said. Than Mr. Street no man was more thorough in planning. That there were faults in his Law Courts was no fault of Mr. Street, but it was the fault of those who bound him in chains of instructions which he could not burst. It was not Mr. Street's fault that the noble hall of the Law Courts was rendered useless, for, in obedience to the most exact instructions, the hall was divorced from the Courts. This, and other defects in the noble pile of buildings, were not due to the great master, but to those who fettered him with instructions. A nobler front than that of the Law Courts could not be found. After-generations would call it a noble building and an honour to the century in which it was erected.

The proceedings then terminated.

#### EDINBURGH ARCHITECTURAL ASSOCIATION.

THE opening meeting of the current session of the Edinburgh Architectural Association was held on Monday, Mr. David McGibbon, President, in the chair. Mr. T. Fairbairn, the hon. secretary, read the secretary's report for the past year. The Council, it stated, were much gratified in reporting that the past session not only was the most useful in the history of the Association, but also was one that held out abundant promise for its future development. The Council, during the session, felt it their duty to memorialise Her Majesty's Government in regard to the present state of the hall in Edinburgh Castle, and attention has been promised on the part of the Government to the subject. The report referred with satisfaction to the work in progress of repairing Craigmillar Castle by the proprietor, which would be of great value in tending to preserve what remained of a building rich in architectural features and historical associations. The Association was again placed under obligation to Professor Baldwin Brown, who had obtained an ordinance from the University Court, to the

effect that members of the Edinburgh Architectural Association be permitted to attend the fine art class next session on payment of a very modified fee. The membership of the Association continues to increase. It now numbers 270, which shows an increase of thirty-five during the year. The report by the treasurer, Mr. John Whitelaw, showed that the balances in bank and in hand amounted to 105*l.* 1*s.* 11*d.* The ordinary income during the year was 135*l.*, and the expenditure amounted to 101*l.* 6*s.* The reports by the conveners of the Sketch-book Committee and the Work-class Committee were also regarded as satisfactory. In moving the adoption of these reports, the chairman very warmly congratulated the members on the growing prosperity and the growing usefulness of the Association. A considerable number of new members were proposed for election. Mr. G. Washington Browne was appointed president for the current year; Mr. David McGibbon was elected vice-president; Mr. Hippolyte J. Blanc and Professor G. Baldwin Brown were elected vice-presidents; Mr. T. Fairbairn was re-elected honorary secretary; and Mr. John Whitelaw was re-elected honorary treasurer. The retiring President, in course of his address, anticipated that the coming session of the Association would prove a most interesting and useful one, and he was most happy to find that the Association was increasing in membership, and had made gratifying progress during recent years.

#### MR. RUSKIN'S LECTURES.

IN the third of his series of lectures on "The Pleasures of England," which was delivered on Saturday afternoon, Mr. Ruskin discoursed on "Alfred to Cœur de Lion—the Pleasures of Deed." He said it had been his endeavour in the preceding lecture to vindicate the thoughts and arts of our Saxon ancestors from whatever scorn might lie couched under the terms applied to them by Dean Stanley—fantastic and childish. That day his task must be carried forward, first, in asserting the grace in fantasy, and the force in infancy, of the English mind before the Conquest against the allegations contained in the final passage of Dean Stanley's description of the first founded Westminster; a passage which accepted and asserted more distinctly than any other equally brief statement he had met with to his mind, the extremely disputable theory that the Norman invasion was in every respect a sanitary, moral, and intellectual blessing to England, and that the arrow which slew her Harold was indeed the arrow of the Lord's deliverance. Having quoted the passage, he said there must surely be some among his hearers who were startled if not offended at being told that the minds of our Saxon fathers were, although fantastic, dull, and, although childish, stagnant; that further, in their stagnation they were savage, in their dullness criminal, and that the future character and fortune of the race depended on the critical advent of the didactic and disciplinarian Norman baron, at once to polish us, stimulate, and chastise. At the very moment when the faith, innocence, and ingenuity of the Saxons were on the very point of springing up into their fruitage, came the Northern invasion. The Northman could not in the nature of him become a Christian at all; and he never did—he only became, at his best, the enemy of the Saracen. What he was, and what alone he was capable of being, he would that day try to explain, with the consequent influence, on each side of the Channel, of this mountain and ice-bred race on the great southern one—influence, however, which virtually ended for both Frank and Saxon with the death of Cœur de Lion, as for the Italians with that of Robert Guiscard. He would advise them that in all points of history relating to the period between A.D. 800 and A.D. 1200 they would find M. Viollet le Duc incidentally, throughout his "Dictionary of Architecture," the best-informed, most intelligent, and most thoughtful of guides. His knowledge of architecture carried down into the most minutely practical details—which were often the most significant—and embracing over the entire surface of France the buildings even of the most secluded villages; his artistic enthusiasm balanced by the acutest sagacity, and his patriotism by the frankest candour, rendered his analysis of history during that active and constructive period the most valuable known to him, and certainly in its field exhaustive. He then read M. Viollet le Duc's description of the Normans on their first entering France, mentioning that as soon as they were established on the soil they became hardy and active builders. Within the space of a century and a half they had covered the country on which they had definitely landed with religious, monastic, and civil edifices, of an extent and richness then little common. They set themselves to build impregnable military walls, and sublime religious ones, in the best possible practical ways; but they no more made books of their church fronts than of their bastion flanks, and cared, in the religion they accepted, neither for its sentiments nor its promises, but only for its immediate results on national order. As he read them, they were men wholly of this world, bent on doing the most in it, and making the best of it they could—men to their death of deed, never pausing, changing, repenting, or anticipating more than the completed square of their keep and roof of their nave. Soldiers before and after everything, they learned the lockings



and bracings of their stones primarily in defence against the battering-ram and the projectile, and esteemed the pure circular arch for its distributed and equal strength more than for its beauty. They would find in all his previous notices of the French continual insistence upon their natural franchise; and they would find also, if they took the least pains in analysis of their literature down to this day, that the idea of falsehood was to them, indeed, more hateful than to any other European nation. To take a quite cardinal instance. If they compared Lucian's and Shakespeare's Timon with Molière's Alceste, they would find the Greek and English misanthropes dwelt only on men's ingratitude to themselves, but Alceste on their falsehood to each other. He had said that the Normans valued religion chiefly for its influence of order in the present world, being in this as nearly as might be the exact reverse of modern believers, or persons who endeavoured to be such—of whom it might be generally alleged, too truly, that they valued religion with respect to their future bliss rather than their present duty, and were therefore continually, in spite of themselves, doubtful of its direct commands, with easy excuse to themselves for disobedience to them. Whereas the Norman, finding in his own heart an irresistible impulse to action, and perceiving himself to be set with entirely strong body, brain, and will in the midst of a weak and disorderly confusion of all things, took from the Bible instantly into his conscience every exhortation to do and to govern, and became, with all his might and understanding, a blunt and rough servant—knecht, or knight, of God—liable to much misapprehension, of course, as to the services immediately required of him, but supposing, since the whole make of him, outside and in, was a soldier, that God meant him for a soldier, and that he was to establish by main force the Christian faith and works all over the world so far as he comprehended them; not with the Mahomedan indignation against spiritual error, but with a sound and honest soul's dislike of material error, and resolution to extinguish that, even if perchance found in the spiritual persons to whom, in their office, he yet rendered total reverence.

Having alluded to Sismondi's account of the founding of the Norman kingdom of Sicily, which was virtually contemporary with the conquest of England, he asked his hearers to read with it the sketch in Turner's History of the Anglo-Saxons, of Alfred's war with the sea-king Hasting, pointing out to them, for a foci of character in each contest, their culminating incidents of naval battle. Guiscard, in his struggle with the Greeks, encountered the Venetian fleet, under the Doge Orseolo. The Venetians were at that time undoubted masters in all naval warfare, but on the third day the tired and amazed Italians were defeated. The sea-fight between Alfred's ships and those of Hasting ought to be still more memorable to us, as the Normans were thoroughly worsted. But before he could illustrate further either their deeds or their religion he must for an instant meet the objection which he supposed the extreme probity of the nineteenth century would feel acutely against these men—that they all lived by thieving. Without venturing to allude to the *raison d'être* of the present French and English Stock Exchanges, he would merely ask any of them, whether of Saxon or Norman blood, to define for himself what he meant by the "possession of India." He had no doubt that they all wished to keep India in order, and in like manner the Duke William wished to keep England in order. If they would read the lecture on the life of Sir Herbert Edwardes, which he hoped to give in London after finishing this course, they would see how a Christian British officer could, and did verily and with his whole heart, keep in order such part of India as might be entrusted to him, and in so doing secured our Empire. But the silent feeling and practice of the nation about India was based on quite other motives than Sir Herbert's. Every mutiny, every danger, every terror, and every crime occurring under or paralysing our Indian legislation, arose directly out of our national desire to live on the loot of India, and the notion of English young gentlemen and ladies of good position falling in love with each other without immediate prospect of establishment in Belgrave Square, that they could find in India, instantly on landing, a bungalow ready furnished with the loveliest fans, china, and shawls, ices and sherbet at command, four-and-twenty slaves succeeding each other hourly to swing the punkah, and a regiment with a beautiful band to "keep order" outside all round the house.

Describing the men who lived at the date of his lecture, Mr. Ruskin said they were men who took pleasure in deed. They did not suppose—they, British boys—they overthrew Napoleon when their Prime Minister folded up the map of Europe at the thought of him. Not they; but the snows of heaven, and the acts of Him who dasheth in pieces with a rod of iron, who casteth forth His ice-like morsels, who could stand before His awe. Mr. Ruskin exhibited a handsomely illuminated leaf from the Bible of Charles the Bald, grandson to Charlemagne, which bore in the centre a yellow lion. It bore out the religion expressed in the prayer of Alfred, which he had read at the last lecture. The motto on the Bible leaf was:—"This lion rises, and by his rising breaks the gates of hell; this lion never sleeps, nor shall sleep for evermore." That was the inscription round the first authentic lion which they got. The Professor remarked that he must here leave the lecture for that day, because, as they chose to spend their University money

in building ball-rooms instead of lecture-rooms, he could not remain any longer in that black hole with nineteenth-century ventilation. Before concluding, however, he exhibited several specimens of art, tracing the development of the lion from that in Alfred's time to the present day. Holding up a framed cartoon from *Punch* of two illustrations in that journal on August 19 last, he said they had there the modern British lion, drawn by themselves, and also the peculiar product of the nineteenth century, idealised and realised in the same copy of *Punch*. The one cartoon represented "Jones and Smith at two different stages of the same sumptuous dinner," and the other was Mr. John Bright as a lion, with a lordly coronet beneath his paw. *Punch's* explanation of the picture was "The Old Lion Roused." Mr. Ruskin had changed the word old to "new," and that of roused to "stuffed." The subject for next Saturday is "Cœur de Lion to Elizabeth—the Pleasures of Fancy."

## EARLY CELTIC MONUMENTAL INSCRIPTIONS.

THE sixth and concluding lecture of the Rhind lectures in archæology has been delivered by Sir Samuel Ferguson, Q.C. The lecturer described all the Oghamic monuments of Scotland as belonging to the scholastic variety, in which digits constituted vowels as well as consonants, and the notch was unknown. The Scottish Oghams might therefore be considered the more modern, and in them they might be prepared to find more of that studied obscurity which appeared to have originated in the pedantry of later ecclesiastical scribes. The monuments were about equally distributed over the mainland and the islands, all the examples of the former being allied with peculiar Picto-Scottish forms of sculpture. Beginning with the Shetland Islands, the most distant point northward at which Ogham inscriptions had yet been found, Sir Samuel described the Lunnestaing monument, which was clearly, almost elegantly, cut on a smooth flag, retaining the traces of every character, yet the artist had succeeded in making it one of the obscurest Oghams with which he was acquainted. One of other two Oghams in Shetland was the Bressey monument, which afforded further evidence of the Ogham having been in use among a mixed Celtic and Norse population, and was a most welcome and well-assured standing ground in chronology. He knew not whether to regard the Bishop of Limerick's identification of the St. Olan monument in Ireland or of that record of the descendants of Naddodd, the discoverer of Ireland, as the more brilliant critical achievement. The stone was of considerable size, covered on both faces with Christian ecclesiastical sculpturings, set in a symbolical framework representing the swallowing and disgorgement of Jonah, and engraved on both edges with Ogham legends, which seemed to belong to about the middle of the tenth century. Having referred to the Orkney example, from North Ronaldshay, and now in the museum of the Royal Society of Antiquaries, which he considered the most minute lapidary Ogham hitherto found, the lecturer said it might exercise a good deal of speculation to know how that writing came into Orkney and the Shetlands. The more obvious idea would be that it had been introduced by the Columban clergy. But the question might be asked, with much cogency, how it happened that there were no traces of Ogham at Iona, or Derry, or Durrow, or Kells, or at any of the centres of Columban missionary activity on the Continent? The pre-Columban Christianity of Scotland was that of Galloway and Strathclyde, but these districts were destitute of Oghams. Pictland alone on the mainland of Scotland possessed them, in like manner as it alone possessed its particular lapidary symbolic sculptures. Pictland, certainly, would be the highway to the Northern Islands and to Iceland, and it might be worth consideration whether the Christian monks called Papæ, whom the discoverers of Iceland found there in the ninth century, were not the representatives of some such pre-Columban influence from the Scottish mainland; for Papa, although it had lingered in the Breton Church, was certainly not Columban nor Irish, but characteristically Eastern. Coming to the mainland of Scotland, Sir Samuel said the monument which in its general aspect most resembled the old Irish and Welsh examples, was that at Newton, in the Garioch, Aberdeenshire. The remaining four in Scotland were at Logie and Aboyne, Aberdeenshire; Scoonie, in Fife; and Golspie, in Sutherlandshire. The Fifeshire monument offered an animated representation of a stag hunt, and, if they accepted as an analogy the sculptured slab of the stone coffin of St. Andrew, these hunting scenes pointed to the pursuit of salvation in Christ. The mystical chase, however, was but one of a great number of lapidary devices of an extraordinary kind which occurred as well on Ogham as on other stone monuments throughout the old Pictish part of Scotland. Dr. Joseph Anderson, Edinburgh, had the distinction of having demonstrated the Christian character of several of these monuments, independently of the crosses engraved on them. A cross, indeed, did not absolutely and of necessary inference show a monument to be Christian; but the general presumption in favour of the Christian symbol being of Christian times was so strong, that one could not



but think those antiquaries over-fastidious who declined to accept its evidence on the monuments of an ancient Christian country, because it was accompanied by unexplained forms of animals and other devices of crescent moons, circles, and sceptres, with which Dr. Stuart in his magnificent work had made the learned world familiar. These objects accompanied the cross on several monuments of this class, which Dr. Anderson had demonstrated to be Christian by comparing one of their sculptured features with the Jonah and whale of the Catacombs, and of Mediæval metal-work. He had also identified other objects on the same monuments with what might be called scenes in natural history, drawn from a peculiar kind of literature which still, the lecturer believed, rested in MS. in the Bestiaries of the latter Middle Ages. A further proof of the entirely Christian nature of all those objects was to be found in the Norrie's Law symbol, which existed in several varieties of form throughout the Picto-Scottish field. The general outline presented the neck and head of an animal, equine or canine, as in the examples from Wemyss Cave and Norrie's Law. That outline was, so to speak, transfigured into a branch-like contour by a conventional floriation of the lines of the head. In one of the Scottish figures, that of the elephant, the terminal convolutions, which in the Swedish symbolic creature were confined to the face and jaw, were extended to all the extremities. The Clavis ascribed no special meaning to the elephant; but in the Bestiaries it was treated as the emblem of chastity. Whether it was a type merely of a particular virtue, and so referable to the Mother of our Lord, or was a symbol having a more universal meaning, this device of the transfigured elephant had a proved antiquity, carrying back its use in Scotland, where alone it had been found, into the age of urn-burial and of the use of bronze weapons. That it was always of Christian import he inferred from its always being found in Christian emblematic company; and if it were so, it carried back Christianity in Scotland to a surprisingly early date, and tended powerfully to set up the old traditions of a pre-Ninianite conversion. Looking back on the entire series of his lectures, Sir Samuel said there appeared to be two questions of primary importance for the historian and philologist:—Was this method of writing of Pagan or of Christian origin? and was the language in which these names and formulas were expressed a quasi-hieratic dialect, not trammelled by the ordinary laws of Celtic speech, or was it the vernacular language of those who carved the inscriptions? No treatment of the first question was likely to be satisfactory which did not fully investigate a class of quasi-Oghams and pseudo-Oghams in both countries, of which he had not time to speak, as well as all the remains of inscriptional figuring on the Pagan sepulchral monuments of the Boyne and Slieve-na-Calliagh districts. As regarded the second, he was content to leave it in the hands of those who had made the philosophy of language their study, claiming only the credit of having supplied their researches with authentic data in the texts he had presented. His hope was that, from the material he had assisted in supplying, future investigators might derive larger and surer conclusions, which might give to Ogham literature a well-ascertained place among the aids to the early history of our islands.

#### LEEDS AND YORKSHIRE ARCHITECTURAL SOCIETY.

THE annual meeting of the Leeds Architectural Society was held on Monday at the Institution, Leeds. The President (Mr. E. Birchall), after a few preliminary remarks, in which he congratulated the Society upon its progress, handed the rewards to the two prize-winners. Mr. J. H. Greaves, Pontefract, received a silver medal, awarded by the Society, together with five guineas from the President, for a set of drawings and details illustrating Woodsome Hall, near Huddersfield, whilst Mr. C. E. Tute received the sum of two guineas, given by Mr. J. B. Fraser, F.R.I.B.A., for a design for a church tower and spire. The President then delivered his address. It might, he said, be of advantage to the Society and to the profession at large if the Society were affiliated with the Yorkshire College, where there might be instituted a Chair of Architecture both constructive and artistic. Such an alliance would be of assistance in guiding administrative work, and might lead to the formation of a collection of plans, sections, and elevations of remarkable buildings drawn to a uniform scale, to the supervision of the building by-laws of the borough, to modifications in legislation affecting the erection of buildings, and to the testing of patents and new materials. The preservation of civic buildings and public monuments might well come within the purposes of architectural associations generally. He would suggest the appointment of a Committee of Advisers, whose duties should be to report on the condition of theatres, baths, markets, and similar buildings, to superintend the erection of buildings fronting public streets, and to examine buildings in course of demolition, unhealthy and dangerous establishments, and premises injured by fire. The President went on to express the opinion that the architect was not sufficiently appreciated by the employing world. Hasty criticism and condemnation of designs, that had taken weeks of professional

study by men of special learning, was too frequently bestowed upon such work by awarding committees of competitions; and the result was that architects were beginning to show an indifference towards entering such competitions. Frequently the committees found out their mistake when it was too late. To remedy this anomaly the President suggested the appointment of professional assessors, whose awards should, as a rule, be final. One encouraging sign of a more appreciative taste for architecture, and of a desire for real professional art and science, was that architects were becoming more generally consulted on designs for decorating and furnishing the interiors of houses and other buildings. The articles that had recently appeared in certain journals on the subject of house drainage had increased public alarm rather than helped to remedy the evil. The defects of drainage generally he traced to the workmanship of speculative builders, who stood aloof from professional assistance; but sometimes it was traceable also to the laxity of former sanitary authorities. He urged that house buyers and occupiers should have the properties more frequently examined by competent surveyors so as to insure the premises being kept in a satisfactory sanitary condition. Local authorities, he suggested, should be armed with additional summary powers to compel landlords to repair and maintain their houses in a habitable and cleanly condition, and to prevent the demoralising influence of over-crowding; in default of which the buildings should, after due notice, be demolished. Sufficient power should be given to the inspectors to enable them to go about their work fearlessly. Alluding to the subject of the dwellings of the poor, the President pointed out the prospects of several companies formed for erecting artisans and labourers' dwellings. Some of them were paying on an average a dividend of 5 per cent. The arrangement of town houses on flats for the "better" classes had had a short trial, but he did not think this system was growing in popularity. An outbreak of infectious disease would, he thought, be very disastrous in such buildings. As to the smoke abatement question, he did not think the smoke nuisance was to be overcome simply by appliances or alterations of chimneys. A good deal of help could be rendered by the exercise of greater economy at the domestic firesides, and by a more thorough sweeping of the streets. It would be of advantage if Mr. Pridgin Teale's system of economising fuel could be adapted to furnaces.

A vote of thanks to Mr. Birchall, for the address, was proposed by Mr. W. H. Thorp, A.R.I.B.A., and seconded by Mr. Harry May, A.R.I.B.A. Having been supported by Mr. G. B. Bulmer (hon. secretary) and by Mr. Simpson (of Wakefield), it was cordially agreed to.

The Secretary next read a code of new rules, to facilitate the election of members at any time during the year, instead of, as now, only during a session. These having been adopted, the question of the affiliation of the Society with the Yorkshire College was referred to a committee for consideration.

#### THE INTERNATIONAL HEALTH EXHIBITION.

THE following report from the executive council of the International Health Exhibition was presented to the Prince of Wales on the last day of the exhibition:—

May it please your Royal Highness,—We have the honour to report that the International Health Exhibition was closed this evening, the attendance on this the closing day having been 37,168. The exhibition has been opened 151 days, being five days less than the Fisheries Exhibition in 1883. The fact that 4,167,683 admissions have been registered during the hours this exhibition has been open incontestably proves the public approval of its objects, and also demonstrates the great value for exhibition purposes of the ground at the disposal of the Commissioners of 1851. Even this site, however, extensive as it is, was found in practice very restricted for the full accommodation of the recent exhibition and the comfort of the numerous visitors. The close attention given to the various exhibits, together with universal good order, has been a characteristic feature of the exhibition throughout. Notwithstanding the large numbers, as high as 71,884 in one day, which have thronged the gardens and buildings, no injury has been done, no loss sustained. The exhibition has comprised the exhibits of 2,109 exhibitors, supplemented by the Chinese exhibitions and the collections forwarded by the Japanese and Siamese Governments, and also by some exhibits which we deemed it proper to form, or to assist in forming, as being beyond the scope of ordinary exhibitors. Such were—1, the historical series of dress exhibits; 2, the display of the power of electric light for external and internal lighting, as also for ornamental display; 3, the Tartar mares from Orenburg and the preparation of koumiss on the spot; 4, the sanitary and insanitary houses; also, as having a special scientific educational value, 5, the hygienic laboratories, biological and physical; and, 6, the formation of a library of sanitary works and papers. Of these it is hoped by many persons that the library and the laboratories may have more than an ephemeral existence. The library, containing already a valuable collection of publications and Government papers on sanitary matters from all parts of the world, would—if made accessible free of charge throughout the year to the many who



take an interest in sanitary questions, and supplied with the various publications and papers from time to time issued on such matters—doubtless be of very great utility. It would enable those interested readily to ascertain recorded facts, and thus remove misapprehension on matters of vital import to the well-being of the nation. The maintenance of the laboratories would insure a means of sanitary research and teaching for the future which England has not had in the past. In these laboratories studies could be carried on, and teaching could be given of a kind similar to that which is afforded by various foreign institutions which have been established in the interest of the public health. These studies have a direct bearing on the solution of health problems, which not only affect the well-being of communities, but exercise an important influence on agricultural and commercial interests. With your Royal Highness's permission, we would propose to consider further these matters, and perhaps make suggestions for your Royal Highness's consideration. The educational division of the exhibition, mainly displayed in the City Guilds Institute, contained a very good representation of the most important educational movements, and deserved the close study given to it by those specially interested in education. It would be impossible to enter into details about the various elements of this exhibition; but the gymnastic exercises for boys and girls conducted under the guidance of the educational division of the exhibition met with approval from the public and from educational authorities. In order to make this undertaking as useful as possible for advancing knowledge, arrangements were made for holding a series of conferences and for the delivery of lectures on subjects connected with public health and education. These conferences were conducted under the superintendence of various societies. They dealt with many subjects of public interest, and it is believed that much useful information was thereby diffused, and that in some instances practical results of value to the public health may be expected. We have the honour to transmit a complete set of the literature of the health branch of the exhibition, comprising, in volume form, twenty-eight handbooks and the reports of fourteen conferences and thirty-eight lectures. Those connected with the educational branch will accompany our further report. The expenses of the exhibition, both in its organisation and maintenance, have been heavy. The magnitude of the work which was done will be fully demonstrated in our final report, which we shall shortly make; but we are already enabled to state that no call will have to be made upon the guarantors, and that we shall be in a position to return the several deeds of guarantee. For and on behalf of the Executive Council, BUCKINGHAM and CHANDOS, Chairman.

#### PETERBOROUGH CATHEDRAL.

A LETTER has been written by Dr. Walker, of Peterborough urging the claims of the cathedral to be preserved, restored and beautified at the public expense. Describing the work of the past two years he says:—The great central Decorated tower, with the defective and crumbling Norman piers on which it was supported, has been carefully taken down, and the work of restoration has progressed as far as the rebuilding of these piers up to their capitals. During the preliminary work of demolition several points of great antiquarian interest have come to light, not the least important being the discovery, among the materials of which the tower was constructed, of a sufficient number of the wrought stones of its predecessor to enable the architect, Mr. Pearson, to restore, on paper, many of the details of that magnificent, lofty, three-storeyed, but probably badly built Norman tower. No one familiar with our cathedral can forget the want of height in the central tower, which has just been removed. To cancel its stunted appearance, the original or contemporary architects raised an octagon wooden structure; and when this was removed in 1798, Dean Kipling, with the same object, built at his own expense the four corner turrets which have received much invidious notice since his time. The question has now arisen whether in rebuilding the tower the defect which was inevitable in the fourteenth century, since the weak piers could carry no loftier structure, should be repeated, or whether, now that pillars of perfect solidity resting on stable foundations have replaced the feeble ones, it is not the duty of the custodians of the edifice—of those who are building for future centuries—to reconstruct the tower, so that while it shall retain the beauty of the fourteenth century design it shall lose the very palpable defect of its dwarfed proportion to the building of which it forms a part, a defect which is believed by some to have been intentional in order that the eye of the observer might not be attracted from the western front. Mr. Pearson has prepared a design in which, by inserting one stage of the old Norman arcading, he raises the base on which the decorated tower is to be replaced 30 feet. This in itself would give to the tower that dignity which was aimed at by the device of the wooden octagon, and later by Dean Kipling's four turrets; but what is of almost greater importance is that it would give the opportunity at any future time for those who had the means at command to erect a central spire which would be proportionate to its base and to the glorious building of which it

would be the centre. In the fourteenth century the height of the tower was of necessity regulated by the weight which the piers could carry. The tower then erected was, almost certainly, only a compromise between that which the genius of the architect conceived and that which the feeble foundation demanded. If now the Dean and Chapter are driven, either by the cruel pressure of impecuniosity or by the dread of diverging from the compromise of the fourteenth century, to retain inch for inch the former dimensions, and again to bury the tower among the high-pitched roofs of the nave and transepts, they not only perpetuate a defect, but they, the custodians for the moment of this national building, place an impregnable barrier in the way of any future efforts to give dignity to this main feature of the edifice. At a recent meeting of the restoration committee, who represent the subscribers of the funds, a resolution was passed recommending Mr. Pearson's plan to the Chapter, and I trust that this recommendation of the committee may be backed by further expressions of public opinion, and that to these expressions may be added such further pecuniary aid as may provide the 5,800*l.* required to carry out the design.

#### GREEK TREASURE TROVE.

THE case of the three Greeks, Jean Frango, and Antonio Frango, farmers, and Nicolas Nicolaine, a pilot, who were charged with being in unlawful possession of two pieces of statuary worth 15,000*l.*, and belonging to the Greek Government, was again heard at the Thames Police Court on Friday in last week. According to the Greek laws, the prisoners were under very heavy penalties for removing the statuary from Greece without the permission of the Government. Chief-Inspector Greenham said that he kept observation on the prisoners after their arrival from Smyrna on board the *Ardmelle*. On October 1 he saw the three prisoners, and had some conversation about the statuary. Witness was first shown the head, and Nicolaine said that he would take 110*l.* for it. Next the statue was produced, and Nicolaine said that he wanted 10,000*l.* for that, which would be the lowest, as they had had that amount offered for it in Paris. Witness said that he would give 1,500*l.* for the statue of the female, but Nicolaine said that would not do at all. A fireman on board the steamship *Ardmelle*, said that on the voyage from Smyrna he had some conversation with the two Frangos about the statuary. They said that they wanted to take it back to Greece, but that Nicolaine would not let them. Afterwards one of them said that they would give him 100*l.* not to say anything about the things.—Mr. C. T. Newton, C.B., Keeper of the department of Greek and Roman antiquities, British Museum, said that he had examined the two pieces of statuary. As far as the head was concerned that was undoubtedly antique. It was probably of the time of Augustus. With regard to the female figure witness also believed that that was antique, but he could not speak so positively as to that. He should like to compare it with other antiques, and have it washed. The statue probably represented the Greek Diana. Witness would prefer not to name any value for either the head or the other figure.—By Mr. Abrahams: I have never heard of the Elgin marbles being claimed by the Greek Government. I believe that Lord Elgin obtained a firman from the Sultan for their removal. I have purchased Greek antiquities at Paris and elsewhere, but I certainly have never been charged in connection with such purchases.—Mr. F. Whelan, dealer in antiquities, said that he had examined the statuary. He believed that they were genuine. With regard to the head, in witness's opinion it would be worth about 5*l.* With regard to the female figure, the market value of that would be 200*l.* or perhaps 300*l.* In witness's opinion 10,000*l.* would be an absurd sum to ask for it.—The Secretary to the Greek Consulate said there was a special law passed relative to the discovery of antiques. By it the finder was bound to give notice within three days, under penalties, to the Government of his discovery. The property then became his and the Government's, a kind of co-partnership in fact. He could get permission of the Government to sell it to any one in Greece, but he had to hand over half the purchase-money to the National Museum. If he attempted to remove it from the country without permission he was liable to be fined from 50 frs. to 500 frs. If he did take it or sell it out of the country, he would be liable to be dealt with under the ordinary penal code for theft of partnership property. After a long discussion between the legal gentlemen on both sides, Mr. Wontner said that he would ask that the men might be discharged and the statuary remain in the hands of the police. Mr. Abrahams said that he should object to that. If the men were to be discharged the things should be restored to them; the police had no right to detain them. Mr. Saunders said that he thought that this was reasonable enough; if he discharged the men he thought that he should make an order for the police to give up the things. Mr. Wontner said that he should contend that his worship had no power to make such an order. In the end Mr. Saunders discharged all three prisoners, and appointed a day, in about a fortnight's time, when the question of ownership should be argued, the statuary meanwhile to remain strictly in the hands of the police.



## NOTES AND COMMENTS.

MR. COLE ADAMS, in his presidential address, had to call attention to the absence of competition for the essay prize. The Académie Royale de Belgique is, as regards literary composition, in the same difficulty as the Architectural Association. A prize was offered in the class of architecture for an essay upon Flemish architecture in the sixteenth and seventeenth centuries, but only one student made an effort to gain it. His essay was not, however, considered to be deserving of the reward.

M. GARNIER, the architect of the Paris Opera House, has obtained the appointment of a committee representing the Société des Amis des Monuments Parisiens, for the purpose of conferring with the authorities of the city on the best means of preventing the ruin of the sculpture of the Porte Saint-Denis. The gate was erected as a memorial of the victories of LOUIS XIV., in Flanders, from the designs of FRANÇOIS BLONDEL, who was Maréchal de Camp as well as an architect. The reliefs were designed and partly executed by F. GIRARDON, Inspector-General of Works of Sculpture, and were completed in 1674 by MICHEL ANGUËR. One of the objects of the society is the preparation of a catalogue of the principal architectural works in Paris. It is now proposed to extend the field of operations by including remains of old work which may still exist in nooks and corners, and, by forming a Committee of Taste, to aid in securing the amenity of the City.

M. GUSTAVE CHAUVET announces the discovery in a tumulus known as the "Gros Guegnon," on the right bank of the Charente, of a bronze chariot, curiously ornamented, and similar to those which have been found in Scandinavia and Mecklenburg. The body lay in a vaulted recess, and on either side were wheels with detached circular and spherical ornaments, bronze and iron nails, with two Gallic urns. The discovery of another chariot-bier is reported from Septaulx (Marne). The skeleton of a boar, with a knife embedded between the ribs, was found in front of the right wheel. The weapons, horse-bits, and rings enclosed in the tumuli appear to indicate their Gallic origin.

THE last number of the *English Illustrated Magazine* has an interest for architects on account of the illustrations to the article on Eton, which are by Mr. HERBERT RAILTON, A.R.I.B.A. A year or two since Mr. RAILTON was an assistant in an office in Blackburn; he is now recognised as one of the best draughtsmen for newspapers and periodicals. His Eton sketches show a love of the picturesque and a mastery of light and shade, together with skill in expressing the style and character of old work. In their way they are almost unique. They are the drawings of an artist who has had the great advantage of architectural training. With so much skill there is no reason why Mr. RAILTON should not gain eminence in painting, and etching on copper.

THE programme of the Leeds and Yorkshire Architectural Society includes the following papers:—"The Royal Institute of British Architects," by Mr. J. W. CONNOR, F.R.I.B.A.; "A Conversational Address on Fireplaces," by Mr. T. P. TEALE, M.A., F.R.C.S.; "English Homes in the Seventeenth Century," by Mr. J. A. GORCH; "Lightning Conductors," by Mr. SAMUEL VYLE, M.I.C.E.; "An American Frame House," by Mr. G. BEAUMONT, A.R.I.B.A., Chicago, U.S.A.; "Architectural Competitions," by Mr. C. A. ADAMS, F.R.I.B.A.; "The Architecture of the Last Half-Century," by Mr. WALTER SMITH (Technical School, Bradford). Mr. T. G. JACKSON will also read a paper. The Society has a class of design in working order, and offers several prizes to students.

IN his address at the opening of the Class of Engineering in Edinburgh University, Professor FLEEMING JENKIN referred to the present position of electric lighting. It was popularly considered a failure; but according to the professor that arose because, in the first place, an absurd rush had been made on every electric invention brought forward, whether meritorious or not, and large quantities of money had been lost on them, so that now the whole commercial world simply hated the word "electricity;" and, in the second place, because of mistaken

legislation, which must before long be modified. But the present standstill with regard to that use of electricity was, he felt convinced, really only temporary.

THE disaster at the Star Music Hall, in Watson Street, Glasgow, on last Saturday evening, by which fourteen people were killed, is a startling comment on the returns which were lately made to the Dean of Guild showing the relation between accommodation and means of exit in the public buildings of the city. There were about 1,300 people in the pit and gallery on Saturday—or 500 less than the house can hold—while the exit capacity is only equal to 980 people. There was a gate in the passage, and by a fatality, which is not uncommon, it is supposed to have been closed, and thus to have formed a barrier against the egress of the excited crowd. The staircase from the gallery is somewhat spiral, and in parts is only about 3 feet 6 inches in width. Under the circumstances it might be said to be providential that the destruction of life was not greater.

THE Record Society has held its annual meeting in the Chetham Hospital, Manchester. During the year two volumes have been issued to members. One is entitled "The Rolls of Burgesses at the Guilds Merchant of the Borough of Preston, 1397 to 1682, from the Original Rolls in the Archives of the Preston Corporation," and has been edited by Mr. W. A. ABRAM. The rolls for the eighteenth century will form another volume, to be published hereafter. The second volume issued during the year is "A List of the Lancashire Wills proved within the Archdeaconry of Richmond, and now preserved in Somerset House, London, from A.D. 1457 to 1680." It has been edited by Lieutenant-Colonel FISHWICK, F.S.A. Mr. JAMES HALL has undertaken to edit for the Society an original document of great local interest relating to the Civil War in Cheshire, written by Mr. THOS. MALBON, of Nantwich, who was living in or near that town, and died in 1658. The original MS. is preserved at Condover Hall, county Salop. It has also been suggested to the Council that a volume containing a full account of the various MSS. relating to Lancashire and Cheshire contained in the various public libraries in the two counties, with an analysis of the contents of each volume, would be a very suitable publication for the Society to undertake. This would include and be an index to the 45 folio volumes of the Raines MSS. (now in the Chetham Library), the Picope, Palmer, Barritt, and other local MSS. there, as well as those in the free libraries of Manchester, Liverpool, Salford, Warrington, Preston, Wigan, &c., many of which are full of very valuable local information, but owing to the want of indexes are but little known, and not nearly so frequently consulted as they might be.

A REMARKABLE circumstance in connection with the history of railways has lately come to light. In September 1809 the first experimental railway in the United States was laid out by JOHN THOMSON, civil engineer, of Delaware County, Pennsylvania, and constructed under his direction by SOMERVILLE, a Scotch millwright, for JAMES LEIPER, of Philadelphia. It was 60 yards in length, and graded an inch and a half to the yard. The gauge was 4 feet, the sleepers 8 feet apart. The experiment with a loaded car was so successful that LEIPER had the first practical railroad built in the United States constructed for the transportation of stone from his quarries on Crum Creek to his landing on Ridley Creek, Delaware County, a distance of one mile. It is of interest in this connection to know that, previous to the introduction of canals or railways into the United States, ROBERT FULTON, a native of Pennsylvania, went to England, where he spent some years, and in 1795 he contributed some essays on the subject of canals to the London *Morning Star*, and in the spring of 1796 published in London his treatises on the improvements of canal navigation, profusely illustrated with drawings showing his designs for boats, bridges, aqueducts, elevators, &c. With this treatise he published a letter to the Governor of Pennsylvania, pointing out the advantages of canals over turnpike roads, in which he predicted that "the time will come when canals shall pass through every vale, wind round every hill, and bind the whole country in one bond of social intercourse." He sent a copy of his work to President GEORGE WASHINGTON, who returned him a flattering acknowledgment; and he continued to urge this subject on public attention.









"INK-PHOTO" SPRAGUE & CO. LONDON

MIDDLESBOROUGH TOWN HALL  
[ In Course of Construction ]  
VIEW SHEWING CAST IRON ARCHED RIBS FOR FLOOR OF  
G.G. HOSKINS, FR



Nov 18<sup>th</sup> 1884.



& MUNICIPAL BUILDINGS,  
[Erection]  
GREAT HALL CONSTRUCTED BY MESSRS DENNETT & INGLE.  
A. ARCHITECT.

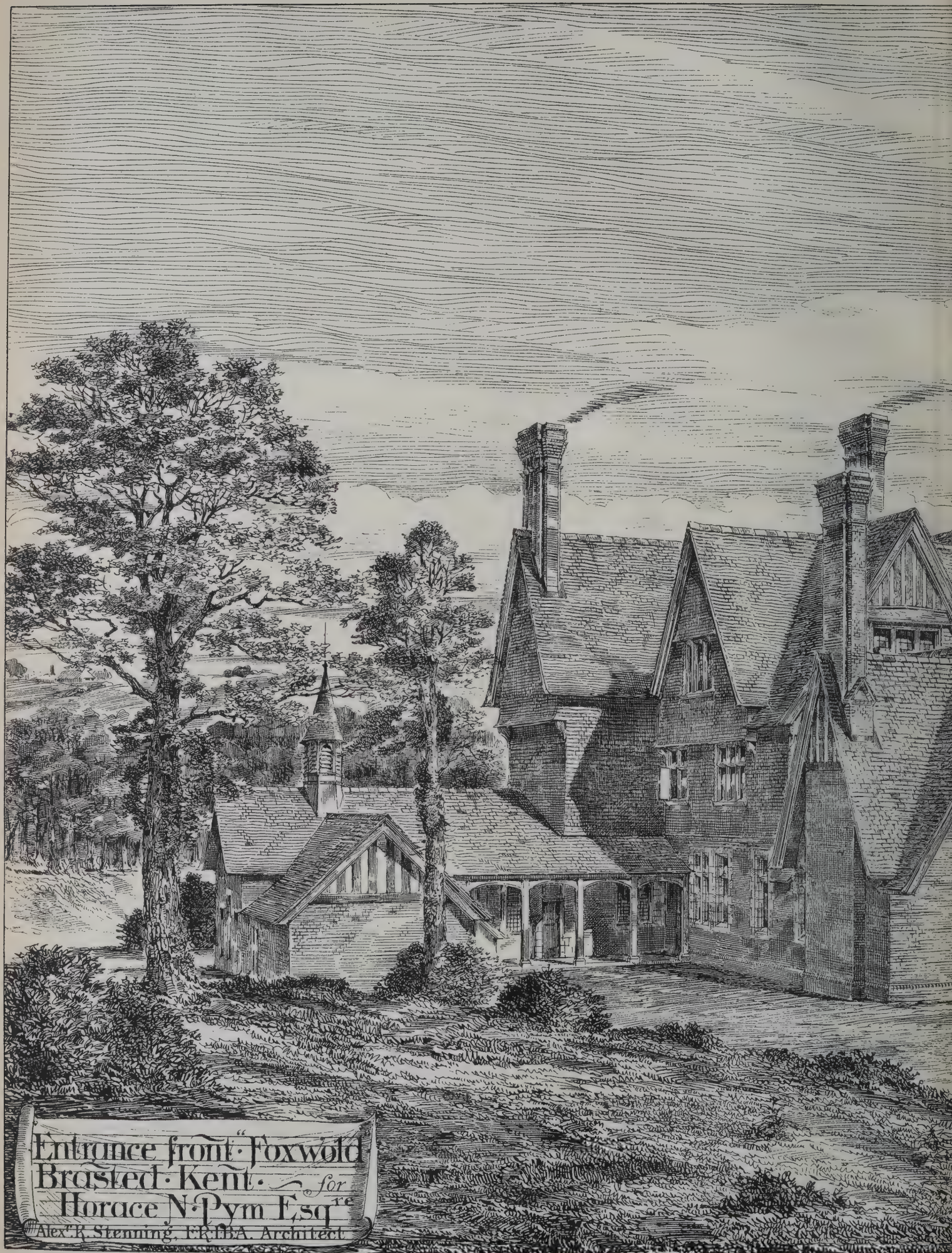
















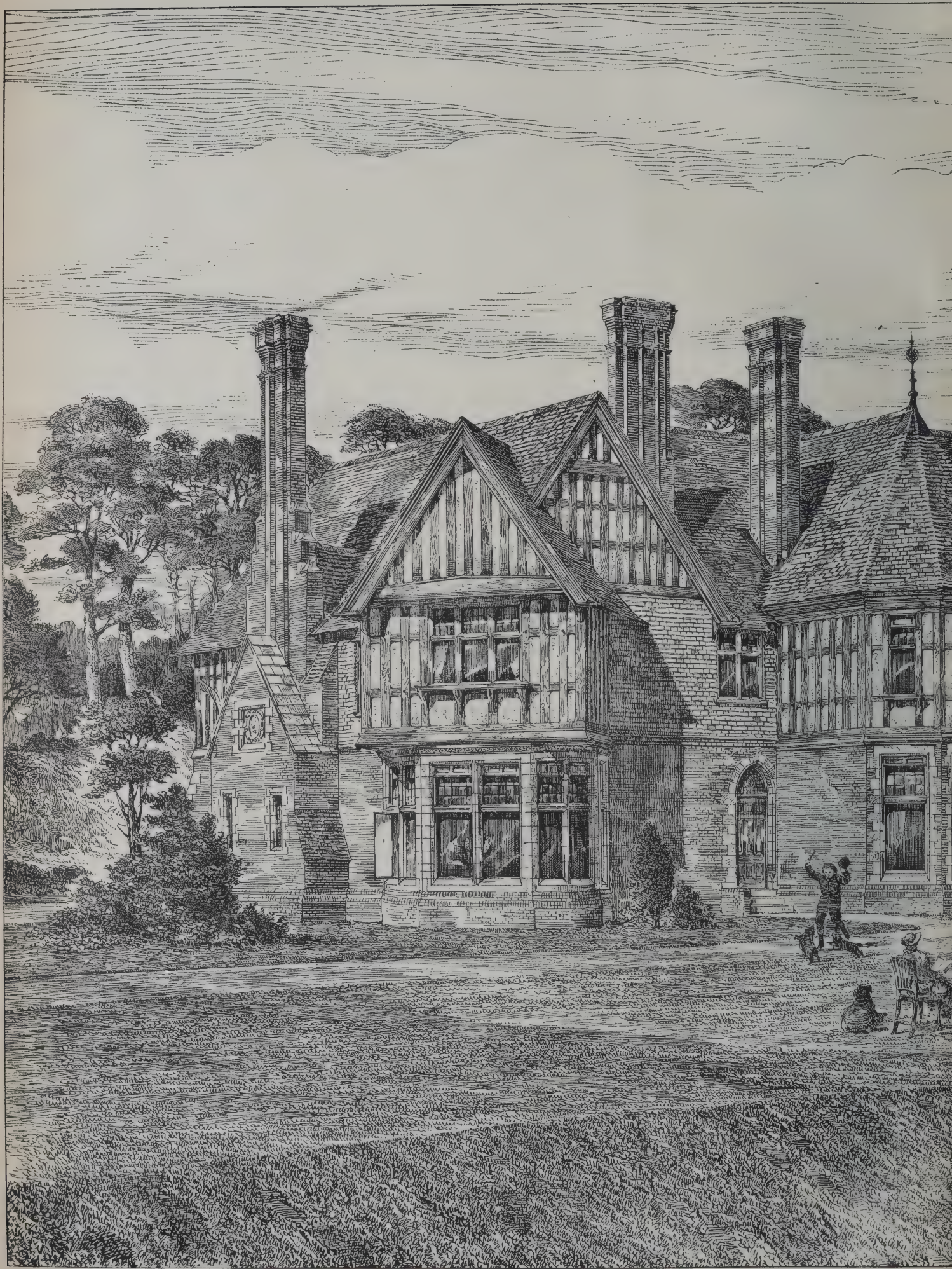














Nov<sup>r</sup> 8<sup>th</sup> 1884.









## ILLUSTRATIONS.

CAST-IRON ARCHED RIBS FOR MIDDLESBROUGH TOWN HALL AND MUNICIPAL BUILDINGS.

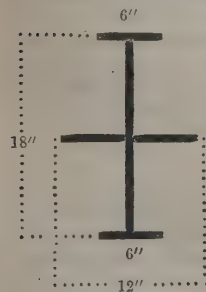
WE have already illustrated the design for the new public buildings in Middlesbrough, and this week we publish a copy of a photograph showing the remarkable cast-iron arches which have been adopted in preference to wrought-iron girders to carry the floor of the great hall.

The size of the hall is 118 feet 6 inches long by 60 feet wide. The whole of the space underneath is intended to be used as a police drill hall. The floor of the lower hall is about  $4\frac{1}{4}$  feet below the general pavement level, and the floor of the Town Hall is  $10\frac{1}{2}$  feet above, thus leaving a height of 14 feet 6 inches from the basement-floor line to that of Town Hall.

It was a *sine quâ non* that the floor space of drill hall should not be impeded by columns, and as the width of the floor which had to be carried was 60 feet, a difficult problem presented itself as to how to accomplish the result desired without unduly lessening the height of the drill hall by using girders of great depth. It may be remarked that it was not permissible to increase the height of the storey either by lowering the basement or raising the level of the floor of Town Hall. If ordinary wrought-iron girders had been used for so wide a span as 60 feet, it would be necessary, in order to insure the rigidity that was demanded for so important a public room, to have their lower flanges not less than  $4\frac{1}{2}$  feet below the Town Hall floor level. The net headway in the drill hall would therefore be only  $9\frac{1}{2}$  feet. The effect of a succession of main girders of such a depth across a room 120 feet long would have been utterly ruinous to its appearance, so far as architectural effect was concerned, and in consequence it had almost been decided to give up the idea of dispensing with columns, with a view of lessening the depth of the girders, when an alternative scheme was suggested of constructing each main girder as a cast-iron arched rib. This scheme was carefully worked out in detail, and it was found to be decidedly more economical than the first proposal of large wrought-iron girders, and, in fact, not more costly than the objectionable alternative of using smaller wrought-iron girders supported by columns.

There were other advantages in favour of the arched plan. The total headway in the centre of the drill hall is 12 feet 3 inches, or 3 feet more than was possible with wrought-iron girders, while even at the abutments there is ample height to allow of the marching of men with fixed bayonets close to the wall. The whole of the floor space can therefore be used without any obstruction or inconvenience. The architectural appearance of the drill hall is no less improved than its utility. The perspective of light cast-iron traceried ribs will have a most pleasing effect.

The general section of the ribs is 18 inches deep by 12 inches wide, the upper and lower flanges being less in width than the middle one, and the thickness of metal varies from 1 inch to  $1\frac{1}{2}$  inches. The upper part of the rib, however, at crown, is concealed in floor, so that the apparent depth of the rib below the ceiling line at that point is less than a foot. The spandrels of the arches are filled in with an effective arrangement of tracery in circles, enriched by quatrefoils. The larger circle will be further embellished with shields, displaying the arms of the Corporation.



The estimated distributed load on each of the arch ribs is about 40 tons, while the lateral thrust at each external abutment under the load will be about 50 tons. As the point of abutment is several feet above the level of the external ground it was necessary to make some special provision for buttressing the arch, and an ingenious arrangement for doing this was designed, which insures absolute security without in any way disturbing or modifying the architectural treatment originally proposed for the external and internal piers. The photograph shows the form of casting designed for this purpose, and it is sufficient to say that before the abutment can be moved the whole weight of the wall of the Town Hall must be lifted.

The architect for the building is Mr. G. G. HOSKINS, F.R.I.B.A., of Darlington.

The engineering work above referred to (as well as the fireproof floor) was entrusted to Messrs. DENNETT & INGLE, of

Whitehall and Nottingham, and has been successfully carried out by them. The castings are of very superior quality, notwithstanding their great size, which is no less than 32 feet by 8 feet for the half ribs, and they have been cast without a flaw. The floor of the Town Hall, which the ribs are designed to carry, is to be of Messrs. DENNETT & INGLE's well-known method of fireproof construction. In this case it will consist of rolled iron joists resting on the upper or horizontal flanges of the arched ribs, and gypsum concrete arches running lengthwise of the room, in spans of about 7 feet.

The engineering details of the work were designed for Messrs. DENNETT & INGLE by Mr. R. M. ORDISH, C.E.

The buildings are making satisfactory progress under the large staff of workmen employed by Mr. E. ATKINSON, of Bradford, who is the general contractor for the works. Mr. JOHN HINDMARCH is the clerk of the works.

FOXWOLD, BRASTED.

THIS house is now being erected for Mr. H. N. PYM on an elevated site in the beautiful valley lying between Sevenoaks and Westerham. Very extensive views are obtained from the house, and the building has been specially planned to obtain these views from all the principal rooms. The contract for the house has been taken by Mr. R. DURTNELL, of Brasted.

All the external walls on the ground-floor are built hollow, and faced with red bricks obtained from Lord STANHOPE's brickfield at Chevening. All the stone has been obtained and worked at Mr. SUMSION's Monk's Park Quarry, Bath, and sent up ready for fixing. The timber framing of the first floor will be executed in oak, filled in with rough cast, and partly weather-tiled. The roof will be covered with dark local tiles from the Bat and Ball Brickworks, Oxford.

In addition to the mansion, an entrance lodge has been built, and a carriage drive formed up to the house.

The whole of the work is being erected from the designs and under the supervision of Mr. ALEX. R. STENNING, F.R.I.B.A., 121 Cannon Street, E.C.

Our illustrations are taken from the drawings that have been exhibited in this year's Academy.

## MR. EWAN CHRISTIAN'S ADDRESS.

THE following address was delivered by the President at the meeting of the Institute on Monday evening:—

Gentlemen,—On bidding you farewell at the closing meeting of last session I expressed a hope that in the beginning of this you would come here refreshed both in body and mind after rest from your labours. I trust that hope has been fulfilled, and though it has been said that the enforced recess is a point on which the Institute requires reform, I must say for myself that I do not in any way agree with that opinion. We all work hard, and rest is needful; and to the officers of this Institute, who to their ordinary vocations add the labour of attending to its interests, I can assure you the vacation is uncommonly welcome.

As regards students, the library is only closed for one month, and that the month above all others in which they can be most usefully learning from nature and not from books; therefore, with an easy conscience, I bid you welcome to the work of the opening session.

The year has been a notable one, both as regards this Institute and the interests of architects. Fifty years of existence have had to be remembered and pondered on. Valuable papers have been read and discussed, especially one with reference to the question of education. Alterations in the government of the Institute have been suggested; an important competition has been entered upon and decided; a conference has been held between the members of our own bodies and others outside; and, lastly, we were asked to take part in a conference of importance at the Health Exhibition, on matters in which architects ought to be specially interested.

On each of these subjects I shall have a few words to say; and I trust you will bear with me in traversing the ground.

*The History of the Institute.*

First, then, in this our jubilee year, let us contemplate for a few moments that which, whether for good or for evil, is now irrevocably past, and then consider for a while whether in all respects we have fulfilled our duty on the lines laid down by the founders of this Institute. And, looking back on the fifty years of our existence, what a wonderful half-century it has been! It has witnessed almost the commencement and the great development of the railway system; the invention and progress of the electrical telegraph, the enormous expansion of postal facilities not yet fully developed, the bridging of the ocean by swift and safe steamers of



ever-increasing power and convenience, the introduction and development of photography, the conception and execution of some of the largest and most important works of engineering the world has perhaps ever seen; the great series of international exhibitions, commencing with that of 1851, of which the late Prince Consort was a most ardent and earnest promoter; besides almost numberless achievements in all departments of science literally fulfilling the prophecy that "many shall run to and fro, and knowledge shall be increased," in a manner that could only have been dimly imagined by the commentators of old; and, not to travel beyond the bounds of our own art and country, it has witnessed a most remarkable revival of ecclesiastical architecture; the rise and full development of the power, happily not yet extinguished, of the great art-critic whose fervid eloquence has done so much not only to open the eyes of the general public to the beauties of art in all its phases, and of the glories as well as the minutiae of nature; whose writings on the subject of our own particular art have had, and I venture to think will have, a wider influence on its study and practice than those of any other man who preceded him, for no nobler writings than those of John Ruskin have graced the half-century of which I have to speak.

It has witnessed almost the whole career of one of the greatest architects of modern times—Charles Barry—and of another man of genius, architect and writer, Aug. Welby Pugin; the whole career of George Gilbert Scott, and, unhappily also as regards their termination, those of George Edmund Street and William Burges, whose loss we have so sorely mourned as all but irreparable, not to speak of those who before its commencement had made their names famous, including our first professional president, the eminently learned and graceful Charles Robert Cockerell, nor of those whose careers, commencing within its area, are still happily amongst us.

#### *The Future of the Institute.*

What the next half century may produce if the world lasts so long, God only knows; but if I may compare the privileges now possessed by the young men of our fraternity with those with which the great men I have named were familiar in their youth, presuming there is in the rising generation as yet undeveloped genius equal to that which has preceded it, much ought to be expected.

I cannot but remember that in the year this Institute was founded I entered the Royal Academy as a student. In those days there was indeed a professor of architecture who gave a biennial course of lectures to students, read by the professor of painting, which, commencing with primitive huts, described all the dry bones of the art with but little allusion to its glorious beauties.

When there was only a small architectural library open one evening in the week, and no special architectural journal had as yet been started, when I compare this state of things with the advantages now possessed by students in the fine library of the Institute, almost always open, in the regular instruction at the Royal Academy of a professed teacher of architecture, supplemented by the personal supervision of eminent members of our profession; the courses of lectures given by able professors at the University College and King's College, which all pupils may attend at small cost, besides the very valuable assistance rendered by a special architectural press, which, commencing with the *Builder* more than forty years ago, has developed so largely, affording opportunities for the acquisition and discussion of every branch of knowledge connected with our art, almost always profusely and sometimes beautifully illustrated; not to speak of the host of other illustrated publications, bringing home to all of us an amount of knowledge of the scenes and buildings of far-off lands, often very valuable and almost always replete with interest to some of us. When I contrast, I say, these differences, what large results ought to be produced, if the industry of students is at all equal to their valuable privileges!

But notwithstanding this advancement, and in such a period of progress, it would indeed have been surprising had we all stood still. Let us turn to our charter and ponder awhile on the petition of those who asked for it.

It recites to His Majesty, King William IV., that his "right trusty and right well-beloved cousin and councillor, Thomas Philip Earl de Grey, hath, by his petition, humbly represented unto us that he and divers others of our loving subjects have associated together for the forming an institution for the general advancement of civil architecture, and for promoting and facilitating the acquirement of the knowledge of the various arts and sciences connected therewith, it being an art esteemed and encouraged in all enlightened nations as tending greatly to promote the domestic convenience of citizens and the public improvement and embellishment of towns and cities, and have subscribed and paid considerable sums of money for those purposes, and have formed a collection of books and works of art, and have established a correspondence with learned and scientific men in foreign countries for the purpose of inquiry and information upon the subject of the said art."

And I would ask, Is it certain that we have done all that in us lay "for the general advancement of civil architecture, and for promoting and facilitating the acquirement of the knowledge of the various arts and sciences connected therewith?"

Professor Cockerell, in his address of April 1860 (twenty-three years after the charter was granted), said:—"Hitherto we have looked to the Royal Academy, the Government Schools of Design, and more recently the museums at Kensington and the two colleges of the London University, for those means (of education) which they command and offer for our benefit. We hope to form schools of our own, together with those advantages, and to offer higher collegiate grades which would reward eminence and recommend by certificates to the public patronage. These last already established in the shape of diplomas in the Colleges of Law and Physic, and every learned society of the present day, prove the advantage of their being also adopted no less in the Institute of British Architects. Our funds, being of our own creation, are necessarily too moderate to embark in such increased means of instruction and usefulness as we have long contemplated, but the time is now approaching for the enlargement of these means to this effect." Whether this hope of the worthy Professor is ever likely to be realised, time alone can fully reveal.

That we as architects, absorbed in fulfilling all the arduous duties of a most laborious profession, can ever become a teaching community in the professional sense, I do not believe; and notwithstanding all that we have been told of the management of these things in France, I venture to think it is not altogether desirable that we should.

I am old-fashioned enough to put faith in the self-reliant qualities of individual Englishmen, and am afraid I must continue to think that the very eminent men whose names I have mentioned would hardly have attained their vigorous stature had they been drilled and organised in the days of their youth after the Governmental fashion, which has been so fully described to us by our secretary, Mr. White.

But those men were giants in intellect and industry, and difficulties for them would only add to the delight of final success; and it is not for such men that such systems are needed.

#### *The Examination Test.*

That the obligatory examination for Associateship with this Institution has been established is indeed a great fact in our history, and when it is made complete, as in all fairness it necessarily must, by extension, with certain exceptions, to those who, not having passed as Associates are seeking the rank of Fellows, one of the great results foreshadowed by Mr. Cockerell will, perhaps, in this most valuable sense have been accomplished.

But examinations necessarily presuppose preliminary instruction, and the question arises, Can anything be done by this Institute for its development or improvement?

Presuming that all young men proposing to enter such a profession as ours have received a complete and liberal education, I agree with the late Mr. Street in thinking that the system of pupilage which enables men to learn exactly how those who have succeeded in making their mark are in the habit of working, is no doubt the strong point of our English system; and, if it be only of sufficient duration, and is properly followed up by taking advantage during its continuance of the artistic instruction offered by the Royal Academy, and that more practical by the professors of architecture, and, more important perhaps still, the thorough study both at home and abroad of the works of the great masters of old, I believe that as much will be done as is really practicable in giving a man an entrance to what must necessarily be a course of life-long study.

But no instruction that can be devised will make men architects who have not the inborn genius to become so. It may, however, make them well-instructed practitioners, and everything that can be done towards raising the general standard of knowledge must necessarily be in the highest degree advantageous.

#### *The Architectural Association.*

Much excellent and highly commendable work has been and is still being done by our younger sister the Architectural Association, and if by any means the work of that valuable institution can be supplemented and aided by our elder body, in liberally sharing with them any advantages which our more matured status may enable us to supply, I think it would be desirable for both, and should by us be ungrudgingly given.

The President of that Association is now, happily, a member of our Council, and it is to be hoped we may always have one, at least, of its most influential members in that position, so that, while working on different lines, the elder and the younger may move harmoniously towards the common goal of each, the end so carefully foreshadowed in the preamble of our charter.

But while advocating, as I would very strongly, the utmost possible strengthening of this bond of mutual assistance, not less strongly would I advise the keeping of the two bodies thoroughly distinct.

Anything that would tend to depress the vigorous elasticity of the more youthful members would, in my judgment, be a thing to be deplored, but everything that we can do to aid them in qualifying themselves to take their places amongst us, first as Associates, and finally as Fellows, will prove, I hope, to be an un-mixed benefit.



*Papers and Meetings.*

But that, irrespective of direct teaching, the past years of the Institute have not been unprofitable in result cannot, I think, be denied by anyone who takes the trouble to peruse the record of its transactions. Mr. Eastlake's paper on this subject, read in 1860, was an exceedingly interesting and instructive *résumé* of what had occurred before that time, and I do not think the historian of the future will find the later proceedings, when carefully considered, at all less valuable.

As regards our ordinary meetings, we have been told that our proceedings are for the good of architects and not of architecture, which is true in a sense, though possibly not in that it was intended to convey. Solomon says that "Iron sharpeneth iron, so a man sharpeneth the face of his friend," and I heartily agree with what fell on a recent occasion from our friend William White as regards the knowledge to be acquired in that sense from attending our meetings; for many an observation, it may be, casually made in our rooms, has struck, and been valuable to myself for life. But while admitting that, and freely acknowledging the very great value of many of the papers read, and the discussions that followed them, there can be no doubt that in ours, as in every human institution, there is room for improvement, and it behoves each one of us, if we desire the continuance of our Society, to put his shoulder to the wheel.

Each member of the Royal Academy, when admitted within its ranks, has, I believe, to present, within the year of his admission, a work of his own, illustrative of his powers as an artist.

Would it be too much to ask of each of our Fellows or Associates, as they join our ranks, the contribution of an essay or paper on some subject connected with architecture or its practice of which he has made a particular study?

I well remember that, at the first meeting I attended as a visitor in the Institute rooms, Mr. George Godwin's valuable essay on "Concrete," which gained him a prize, was read, and I believe on that occasion, or very soon after, he was admitted an Associate. That essay stamped the character of the man, and we all know how ably and honourably it has been maintained throughout the course of a long and laborious life.

Are there none of our younger brethren equally anxious to show what they can do, and would it not be good for them and useful for us that they should take the opportunity offered by our meetings of testing their powers?

Good papers, and free and full discussions, must continue to be the life of our meetings, and the better the papers the more assured will be the reputation of those who read them; and the criticisms afforded by discussion will be alike useful both to writers and hearers.

Nothing is more important than that our meetings should be always made interesting, and if interesting they can scarcely fail to be instructive. Our aim, as members of this Institute, should be, in the words of our charter, "the general advancement of civil architecture, and the promoting and facilitating the acquirement of the knowledge of the various arts and sciences connected therewith in every possible way;" and so long as we act on these lines, our work will clearly show that the protection of our own material interests is not the great end of our corporate existence.

The honourable practice of a noble profession is what our charter requires, and should be one great object of our lives as architects; and, in my judgment, nothing is more likely to conduce to the attainment of this end than the free intercommunication of ideas, which must almost necessarily result from loyal association with one another as members of this Institute.

*Colonial Members.*

As regards our future. In the early days of the Institute, its correspondence was almost entirely limited to the Old World, and naturally so, because there alone are to be found the glorious structures of the architecture of the past; but when we consider the enormous expansion of the Greater England beyond our shores, and yet within such easy reach; when we see or hear of the wonderful cities that by the energy of our fellow-countrymen have been entirely built since this Institute was founded, it cannot, I think, be doubted that more active measures should be taken for enlarging the area of our sympathies and our correspondence, and to aid in the development of the work of those younger people, of whom so much may hereafter be expected.

Statesmen are turning their attention to the federation of the English-speaking colonies, and if the Institute of Architects can do anything to aid the bonds of union, it will, in my judgment, be a mutual benefit. Nothing is more remarkable than the clinging of the colonists of Canada, Australia, and New Zealand to the old country, and anything that can be done to foster this attachment must, I think, be a step in the right direction. Already there are in Australia and New Zealand members of our body, and we hope that their numbers may be increased, and that in India also we may be more strongly represented than at present.

While speaking on this point, I may remind you that, at our meeting of March 24 last, in response to application from abroad, a by-law was so altered as to provide that examinations can now be conducted with a view to the admission of any architects beyond the sea who desire to share in the privileges of membership.

*The Reform of the Institute.*

But, gentlemen, there is, as you are aware, a further question as to the future which requires to be faced. Hitherto I have spoken chiefly of our past and present existence as a body corporate under a charter, and have said but little as to internal government. I must confess that until I needed it for the purpose of this address, I had never very carefully studied that charter, and consequently did not know as I ought how much we were really indebted to the men who framed it. Only one of them now remains, the loved and honoured Nestor of our Institute, Professor Donaldson, and, therefore, we cannot now thank them for the pains they took in providing for its settlement. It is a very valuable document, and, for the times in which it was granted, everything that could be desired, and, as I hope I may have shown you, has been useful as a text for myself.

But times and practices have greatly changed since it was framed, and the bonds in which in some respects it holds us are hardly consistent with the expansion which in others has enlarged our view.

Whereas, in our older days, London architects were almost a class apart, and provincial men seldom wandered beyond their own cities or districts, it may now almost be said that there is no such thing as provincialism.

Our members are to be found everywhere, from the East to the West, from the North to the South, and it should be our aim to bind them all together in one strong brotherhood of mutual regard and confidence, and to make their privileges equal to our own.

Outside our ranks, also, there are able and honourable men who cannot join us, owing to minor technicalities, which we would willingly brush aside, were it not for the fetters which by our charter are imposed.

There is, further, a strong section of our body which feels—and, as I think, justly feels, now that the examination test has been finally settled—that Associates have a right to a larger share in the management of our affairs than by the charter is allowed them.

All these facts point to the necessity of change, and provided it can be prudently accomplished, I for one shall rejoice in the improvement. Naturally, as Englishmen, I hope we all detest revolution; but the best way of avoiding such catastrophes is by the timely institution of necessary reforms.

With this view, therefore, and for the purpose of meeting all questions that have lately arisen with reference to the points I have named, or otherwise, a special committee has been appointed, and is in communication with the honorary solicitor, first, as to the possibility of amending the existing charter, or of supplementing it by additions; and, secondly, failing the possibility of such changes, of ascertaining whether a charter with new provisions could be obtained without sacrificing the traditions of that which we at present possess.

These are important questions, which require time for safe solution; but I think you may rely on the desire of the Council to bring them as speedily as possible to a satisfactory termination.

A charter is undeniably a good thing. It gives to an institution like ours a breadth of base and solidity of structure such as we, as architects, ought greatly to prize.

Most of us, I hope, have some reverence for that which is old, when it has been proved to be valuable in the times that are past; and if without danger to the future we can amend and retain what we already possess, it will be the part of wise men not to let it slip.

*Competitions.*

On the subject of a recent competition you will probably expect me to say a few words.

On competitions in general, so much has been and so often said that I need not detain you by further remarks of my own.

That competitions are an inevitable characteristic of the age; that they were not altogether unknown in the earlier days of our art; and that when conducted on the strictly honourable principles such as should always characterise the practice of the architect, they are by no means the unmixed evil that some would represent has long been my own opinion, and it has not been shaken by what from time to time has been said on the other side.

I cannot myself see why, if we offer prizes to young men for the best designs or drawings produced by them as students, and which most of us think is an incentive to industry in acquiring a knowledge of their art, they should in after years be debarred from securing by similar means that employment in professional life for which their former efforts have been the best preparation.

But, be that as it may, competitions cannot be got rid of; and all we can do in this Institute is to use our best endeavours to get them conducted on sound and fair principles.

I think we are all agreed that no competition should be decided without the aid of a professional referee. This necessity is now much more frequently recognised than was formerly the case, and applications are not unfrequently made to the President or the Council for advice as to the appointment of architects as adjudicators; but it must rest with competitors themselves to insist on the adoption of this safeguard to their interests.

Human nature being constituted as it is, it is not to be expected



that any decision, however just, will satisfy all competitors; but if, instead of railing against the inevitable, men would take pains to search out the reason of their failure, we should perhaps hear less than we sometimes do as to corruption and unfairness where none may at any time have really existed.

As regards the Admiralty and War Offices competition, for the decision of which I had the honour to be selected as one of the professional judges, it would not become me to defend the action of the judges, or to criticise the views of those in authority, who prepared the instructions upon which their judgment was to be founded. I will only say this, which I believe may be taken as entirely true, that the sole object of the latter was to get the best possible building for the detailed requirements of the public service, and of the former to discuss, without fear or favour, the men best qualified to carry their instructions into effect. Whether that end has been accomplished it must be left to the future to declare; I can only say that no pains were spared by any of us for arriving at a just conclusion, and, whether our judgment was right or wrong, it was that which each one of us honestly believed to be right, and, right or wrong, it was absolutely and entirely fair.

It had been said that none of the designs selected were of a monumental character; but when a problem is put before architects, not chiefly for the production of a grand national edifice, but for the convenient accommodation in their everyday work of some fifteen hundred clerks of varying grades, all requiring the primary requisites of light and air, easy access and communications, and comparatively few of the higher officials and chiefs of departments; and practically no room needed for State receptions, and all to be got within a very limited area, it would be a difficult task indeed to combine so much of commonplace with an exterior of monumental character.

Truly, to my mind, the conditions of the problem were barely reconcilable with architectural magnificence, such as might possibly please outsiders, but be in many respects opposed to the everyday wants of the working bees to be accommodated within. Much has been, and much more will doubtless be, said in criticism of the selected design. I shall not add to those criticisms; but, to my mind, it is little short of wonderful that, whatever its faults of detail may be, so fine a plan, and so good an elevation, should have been entirely wrought out by men, solitary students in a provincial town, with no special advantages, untravelled, unknown to the world of art, and who have produced drawings of the most remarkable delicacy, which may have been equalled, but never, to my knowledge, surpassed for perfect execution. That such drawings as those submitted in each competition should have been prepared in so short a time, as I understand, by two men and a youth working together without extraneous assistance, excepting as regards perspective and figure drawing, whatever else may be said, is undoubtedly a very remarkable example of that "well-directed labour," to which, as the great first President of the Royal Academy said, "nothing is denied."

#### *Westminster Hall.*

I will not refer to any other case of competition, but it may not be inappropriate to say a few words on the treatment proposed for one of the noblest of our ancient monuments; and, just as the Chief Commissioner of Works deserves our thanks for his determination to see absolute fair play in the decision as to the new buildings, so, I think, is he to be congratulated on what he has done with reference to the opening-up and preservation of Westminster Hall.

The clearing away of the old law courts has revealed to us a picture such as we could hardly have anticipated, a vision of magnificent simplicity and proportion, which, having once seen, we can hardly bear to lose again.

The appointment of Mr. Pearson as architect for the restoration of the old building showed a wise discrimination and determination to do the best thing possible, and the very able and exhaustive report presented by him is a further confirmation of the wisdom of the choice.

But, while there can be no doubt whatever as to the necessity of the structural restoration of the great hall itself, it is permissible to regret that it should ever again be concealed from view by any new buildings, however correctly designed on the ancient lines, that may not be absolutely necessary for permanent sustentation.

I think in this case the action of Parliament is hardly to be regretted if it gives further time for the consideration of a subject of unquestionable difficulty, and one which so deeply concerns all who care, as we should do, for the preservation of the ancient monuments of this great city.

#### *Conferences.*

With regard to the conferences held in our rooms in the month of May, complete reports of which will be found in the volume of Transactions, it will, I think, be unnecessary to detain you with many observations.

Admirable memoirs were, as you will remember, read by Mr. Wethered on Viollet le Duc; Mr. Beresford Hope on Street; and Mr. Aitchison on Burges; each replete with interest for us as architects.

Valuable papers also on architectural practice were contributed and discussed by members of our own body, and visitors from various parts, the reports of which have been duly recorded, and will, I hope, be found profitable reading in the future.

Professor Kerr wound up the conference with a paper, which Mr. Beresford-Hope rightly termed "a very brilliant one," on English architecture thirty years hence; but although it was an essay of very great interest, I am not sure that the learned Professor has drawn aside the veil which covers the future so completely as he would desire; and he would indeed be a bold man who would venture to prophecy what is immediately in store for us.

I cannot but agree with him, however, in hoping and thinking, if I may quote his own words, that "it may not improbably be the destiny of England, at a period by no means remote in the development of the advancing scheme of Anglo-Saxon civilisation, to assume a leadership—such as she already possesses in so much besides—in the illustrious art which it is the pride and the joy of this assembly to represent.

I trust the gentlemen who visited us from the Provinces were not otherwise than gratified with the reception accorded them, and have taken back to their homes a pleasant and profitable recollection of this happy reunion.

The conference at the Health Exhibition stands on a different footing to that to which I have just briefly alluded, but as many of us took part in it, and a full report of its proceedings will shortly be published, I do not think I need refer to them in detail; most of the subjects treated on were familiar to us as architects, and it was rather for the benefit of the outside public than for our own instruction that the papers were prepared."

Let us hope that some few individuals out of the millions who visited the exhibition may have taken to heart a few grains of knowledge and common sense which may hereafter expand and bear fruit, and be useful to many besides those who were the immediate listeners. Perhaps, however, exception should be made in calling attention to the papers read by Mr. Aitchison and Mr. William White respectively; the former on "The Sanitary Aspect of Internal Fittings and Decorations," and the latter on "The Hygienic Value of Colour," both ably treated, and valuable alike to the architect and to the general public, if they care to profit by them.

The remarkable success of this Exhibition has indeed been one of the great features of the year now drawing to a close, and I think it may be gratifying to us as architects to know that the interesting work of one of our own members, Mr. Birch, in reproducing the picturesque features of the streets of Old London, which he has done so learnedly and well, has not been one of the least attractive features of the show.

#### *Obituary.*

Before concluding my remarks, it is right that I should say a few words on the losses we have sustained in the thinning of our ranks by death, and the position in which we now stand as regards numbers and financial prosperity.

In respect to the first, we, in common with the whole English people, have had to mourn the untimely removal of a prince pre-eminent alike in natural gifts and cultivated intelligence—one whom we had fondly hoped would not only have been an honour to our country, but of great service in all questions relating to our art—a hope, alas! not to be realised. The Council thought it their duty to present an address of condolence to our patron, Her Majesty the Queen, which in due course was graciously acknowledged.

We have also had to regret the loss, though in the full ripeness of years, of a most valuable member of our body, Mr. Knowles, a man who, having passed a most laborious life in the active performance of professional duties, might well have claimed in his declining years entire rest, but who preferred to remain amongst us as an examiner and member of Council, where I may safely say his presence was always as welcome as his opinions were valuable. His last appearance at the Council table only preceded by a few days that of his death.

In Edwin Nash we lost a most excellent man and an architect of no mean power, one always ready to help as a member of the Institute, and a genial and honourable practitioner in our craft.

He left an example in his will which may be usefully followed, in devising a legacy of 100*l.* to the insufficient funds of the Architects' Benevolent Society.

Charles Newman, less known to us, was one of my earliest professional friends; an able man who, if he had not been possessed of independent means, would probably have made his mark more strongly than he did. He has left two sons still happily numbered in our ranks.

Many of you will have known, though I did not, William Pettit Griffith, one of our Fellows, who, I believe, was very highly respected.

In Sir William Siemens not only we, but the whole civilised world, sustained the heavy loss of a prince amongst inventors, and a most genial man, always ready to impart to others, as he did to us at the Institute, some portion of that store of knowledge of which he was so largely possessed.



Amongst eminent foreigners our losses have been still more considerable; two gold medallists, Professor Lepsius, of Berlin, and Jean Baptiste Lesueur, of Paris, besides two other honorary and corresponding members, Paul Abadie, of Paris, and M. Clénard, of Lyons. And, lastly, our Honorary Associate, the eminent physician, Sir Erasmus Wilson, to whose munificence, I believe, we owe the bringing to our shores of the obelisk now standing on the Embankment.

#### Conclusion.

But, notwithstanding these losses, our numbers have increased, and we may be said, in that respect, I believe, to be in thriving condition. I believe, also, it may be very safely said that our financial condition is thoroughly sound.

Finally, gentlemen, although there are several other subjects on which I could have desired to speak, I think I have detained you quite long enough.

The past and the future of our own body is to us a theme of no little importance, and in this fiftieth year of our existence I have thought it better to confine myself mainly to its consideration rather than to wander on the wider field of survey, which might possibly, in some respects, have been more congenial both to you and to myself.

We have seen, I think, that the aims of the founders of this Institute were high and noble. Let their standard in the future be reared still higher. Their work was begun in weakness; let ours be continued in strength; and, putting aside all petty jealousies, let us combine, not for mere personal advantage, but in the truest and most literal sense, for the advancement of our art, and the establishment of its practice on that broad basis of honourable principle which alone is worthy of the noble profession to which we belong.

### AN ANGLO-ROMAN ALTAR.

A PAPER, by Mr. John Clayton, F.S.A., was read at the last monthly meeting of members of the Newcastle Society of Antiquarians, on "An Altar to Fortune Conservatrix, recently discovered at Cilurnum." The author said:—The Roman buildings recently discovered between the eastern rampart of the station of Cilurnum and the river North Tyne have been already partially excavated, and the further excavation is in progress; but the buildings are found to be more extensive and more important than was expected, and it is probable that the excavation may not be completed till the spring of next year, when a full description of the structures by an abler hand than mine, with an accurate plan of the whole, will be laid before the society. In the meantime, detached objects will necessarily be met with, which ought at once to be brought before the society. One of such objects is an altar inscribed to the goddess Fortune. The figure of the goddess is sculptured on the face of the altar. In one hand she holds a cornucopia, in the other a wheel—both of them appendages of the goddess, and generally found upon her statues. The following is an expanded reading of the inscription:—

DEAE FORTUNAE CONSERVATRICI  
VENENUS GERMANUS  
LIBENTER MERITO

The ravages of time, on the features and dress of the goddess, are apparent, but every letter is legible. The use of tied letters in this inscription indicates that its date was not earlier than the reign of Antoninus Pius, when the use of ligatures, or tied letters, was first introduced. Roman altars to Fortune are very frequently found, but the application to her of the epithet *Conservatrix* is almost unique. Only one more example is in existence in Britain, and this is at Netherby, in Cumberland, the seat of Sir Frederick Ulrick Graham, Bart. No. 763 in the *Lap. Sep.* gives an account of it. In Orellius a similar altar was described as having been found at Bath; but in the seventh volume of the "*Corpus Inscript. Latin.*" published in Berlin in the year 1873, No. 211, we are informed that the mention by Orellius of Bath as the place where this altar was found is a mistake, but that, in fact, it was found at or near Manchester, and was either lost or concealed. It is possible that the awakening of the spirit of antiquarian research in Lancashire and Cheshire may rediscover this altar, though German energy and perseverance fail to do so. The dedicator of this altar, like the dedicators of the two altars found last year at Borcovicus, is a German, serving in the Roman army—but the particular branch of the service to which he belonged is not stated—as is done in the case of the dedicators of the two altars of Borcovicus. In a postscript it was said:—After the transmission of the paper a communication has been received from Mr. Thompson Watkin of Liverpool, from which it appears that the suggestion of the rediscovery of the third altar in Britain dedicated to the goddess Fortune, with the epithet "*Conservatrix*," has been already accomplished, and has been announced to the world through the *Manchester Guardian* of June 10, 1884, in the following terms:—"Rediscovery of a Roman altar originally found at Manchester.—Mr. Thompson Watkin sends us the following:—The last certainly known of the Roman altar found at Manchester in 1612 prior to the publication of my '*Roman Lancashire*' was

that *circa* 1770 it was preserved at Hulme Hall; a pencil memorandum upon the inscription preserved at the Chetham Library states that it was afterwards in the Leverian Museum, but no trace of it appears in the catalogue of that collection. It was, therefore, with feelings of the greatest pleasure that, in going systematically through the collection of Roman inscriptions and sculptures preserved in the Ashmolean Museum on May 30 last, I came upon this identical altar. It seems that in 1875 it was presented to the museum by the Rev. J. W. Burgon, M.A., a well-known antiquary and author. How it came into his possession I am not aware. Inspection proved that Horsley's engraving of the stone was a very fair one. The inscription is exceedingly well preserved. On the right-hand side of the altar the *Petera*, in low relief, is well carved and well preserved also. On the left-hand side the *praefriculum* is plainly visible, though somewhat worn."

### GLASGOW ARCHITECTURAL ASSOCIATION.

A PARTY of members of the Glasgow Architectural Association lately visited Paisley Abbey, the new Sheriff Court Houses, and St. James's U.P. Church. Permission to visit the Court Houses was given by the architects, Messrs. Clarke & Bell, Glasgow, and under the guidance of Mr. Henderson, clerk of works, they were inspected with interest. The second of the series of lectures has been delivered in the rooms, 114 West Campbell Street, by Mr. Andrew Wells, decorator, on "*The Growth and Development of the Ornamental Arts.*" After describing the different characteristics of self-decoration, by southern savages applied to their naked bodies, and by northern ones to their garments, Mr. Wells reviewed all the historical styles, enforcing principally the necessity of understanding the influence religious symbolism has had on decorative art. Least seen in the Chinese and Saracenic styles, but very evident in the Indian and Persian, the Egyptian and early Christian, the geometric forms of the triangle, square, and circle, now the basis of most designs, even though only meant to appeal to the artistic sense, had at first a mystic significance, which must be understood ere the full value of these early decorations can be appreciated. At the conclusion of the paper, and after some remarks by Mr. Sellars, a vote of thanks was passed to Mr. Wells.

### BIRMINGHAM BUILDERS' ASSOCIATION.

THE annual meeting of the Birmingham Builders' Association was held on Monday at the Great Western Hotel. Mr. W. Sapcott, jun., presided. In the annual report of the committee regret was expressed that there was no marked improvement in the building trade. The committee further stated that in October last a notice was received from the stone-masons demanding an increase of wages; but on the representation of the committee the demand was withdrawn; and it was decided to refuse to accede to the request of the labourers for an advance of wages. The committee had terminated their engagement with Mr. W. Clulee, the late secretary of the Association, and in his place Mr. E. J. Bigwood had been appointed. A deputation from the Association had waited upon Messrs. Martin & Chamberlain with reference to the conditions of contract of the Birmingham School Board, and obtained some slight concessions. The balance-sheet showed total receipts 90*l.* 3*s.* 11*d.*, which, added to last year's balance of 65*l.* 18*s.* 11*d.*, made a total of 156*l.* 2*s.* 10*d.*, and the various disbursements amounted to 122*l.* 5*s.* 8*d.*, leaving a sum of 33*l.* 17*s.* 2*d.* to the credit of the Association. In proposing the adoption of the report, the chairman said he was sorry that the state of the building trade in Birmingham remained unaltered. It was impossible to report any improvement, for although some few large buildings were in progress, there was a general stagnation in the trade, and many men were short of employment. That the question with the stone-masons was satisfactorily settled might be gathered from the fact that they had not renewed their application. Mr. J. Bone seconded the motion. Mr. R. Mann commented upon the absence of any clauses in the Bankruptcy Bill by which sub-contractors might be protected. He was a member of the Association, and had during the last two years lost 1,600*l.* through the action of three other members. He thought that when a builder made over the value of a contract to some firm or bank, he should not be allowed to run into the debt of a sub-contractor without the latter having knowledge of that circumstance. One gentleman, a member of the Association, assured the speaker that he expected some four or five thousand pounds from a contract, and in consequence he (Mr. Mann) gave him credit, with the result that he afterwards found the money in question was due to a bank. The chairman, in putting the resolution, which was carried, coincided with the remarks of the last speaker, and urged that there ought to be in the Bankruptcy Act some clause by which any balance there might be due to a builder in connection with a contract should not be paid to anyone without some knowledge on the part of the sub-contractor. The election of officers for the ensuing year was then proceeded with.



## TEWKESBURY ABBEY.

THE restoration committee have met to consider the best means of carrying out the restoration to the Abbey Church of the chamber at the south-west angle of the nave, and the opening out an access to the south side of the church through the Abbey House property. The vicar and Mr. T. Collins presented a report embodying their proposals on both these points, which, with some little modification, was adopted by the committee. It is intended to carry these objects into effect as soon as money is forthcoming for the purpose. The work on the south side will involve considerable excavation of soil, which is now in places 4 feet 6 inches higher than the level of the nave floor, and will thus contribute materially to the permanent preservation of the fabric. The vicar and Mr. Collins were thanked for their report. The committee also expressed their opinion that steps should be immediately taken to raise the necessary fund to carry out such work (with such modifications as may from time to time be deemed desirable) referred to in the report. A sub-committee was appointed to carry out the resolution. The subject of providing a lightning-conductor was again discussed, and was ultimately referred to the churchwardens, with a hope that they would at once take steps to have one placed on the abbey tower.

## OAKLEY v. BOYLE.

ON Monday and Tuesday last, in the Queen's Bench Division of the High Court of Justice, the case of Oakley v. Boyle was heard. Mr. Bigham, Q.C., and Mr. A. C. Scott appeared for the plaintiff, and Mr. McClymont and Mr. Le Breton were for the defendants, Messrs. Robert Boyle & Son, of 64 Holborn Viaduct, and 110 Bothwell Street, Glasgow. The action was for commission said to be due under a contract of July 1881, by which the plaintiff in addition to his salary was to receive  $1\frac{1}{2}$  per cent. on all works ordered, executed, and paid for. The defendants replied first that no commission was due. Next they pleaded that, if due, the plaintiff was not entitled to recover because he entered their service by fraud, in not disclosing circumstances of his previous career, which might materially have affected their decision in appointing him their traveller in 1880. Thirdly, they alleged that while in their employ he took an agency for a patent gas-regulator (Bickerdyke's), and in attending to that neglected the defendants' work. For this damages were asked, in the form of a counter-claim. The plaintiff replied that he accepted the agency with Messrs. Boyle's consent, that he did not neglect their work, and that they were well aware of his antecedents long before he left them. On these pleadings issue was joined. The case was tried by Justice Wills with a common jury.

Mr. Bigham, Q.C., in opening the case, said the action was simple and plain in its nature, but there were painful circumstances connected with it which he would have to deal with. The name of the plaintiff, Richard Banner Oakley, was no doubt familiar to them, for many years ago he was convicted of fraud and sentenced to five years' penal servitude, the offence having been committed in connection with a bank, of which he was proprietor or manager, called the Co-operative Credit Bank. Oakley served his time of imprisonment, and purged his offence. He should not have had to go into those matters if the defendants had not chosen by their pleadings to rake up the past of the man to whom they were indebted, and to rely upon it for the purpose of finding an excuse for not paying what they owed him. When he came out of prison, he did what every man ought to do under such circumstances, he tried to get honest employment. He was fortunate enough to retain the esteem of such a man as Sir John Monckton, the Town Clerk of London, and Mr. Cartwright, well known in the City. With their assistance, he was successful in obtaining employment of a humble kind. It was under these circumstances that, in the year 1880, Mr. Oakley being then in want of employment, saw an advertisement in the *Daily Telegraph* for a town traveller. He answered it, secured an interview, gave Sir John Monckton and Mr. Cartwright as his references, and was eventually appointed at a salary of 3*l.* per week. It would be suggested that he suppressed his name, for he signed his letters R. Oakley. He commenced his duties in due course; he performed his duties so well, so efficiently, and so honestly, that he was appointed manager of the London office. So satisfied was Mr. Boyle with the way in which the plaintiff performed his duties, that he placed the control of the books in his hands, and allowed him to deal with confidential matters. Now, as to the suppression of name, he would call evidence to prove that before the plaintiff undertook these extended duties the defendants were well aware of his identity. Oakley was well known in the City before his conviction, and was not likely to escape recognition by many after his release from prison. It was therefore unlikely that the defence set up, that the plaintiff entered on the contract of employment by fraud, by concealing the fact of his conviction, was well founded, and such concealment was no excuse for not paying money which had been actually earned. It was alleged that he falsely represented himself to be Robert Oakley, but that was not so. It was true he did

not tell Mr. Boyle that his name was Richard Banner Oakley, and that he had been convicted; but surely there was nothing very wrong in that. Assuming that he had earned the money he now claimed, it would be a question for his lordship to say if the concealment of his full name was an answer to the action. When Oakley had worked for him about nine months, he had an opportunity of bettering himself by going elsewhere, and he gave notice to leave. That was in July 1881, and shortly afterwards Mr. Boyle wrote the plaintiff a letter, in which he said he should have much pleasure in bearing testimony to his high qualifications as a man of business, and also to his integrity and perseverance in whatever he undertook. Well, Mr. Boyle would not agree to part with Mr. Oakley, so a fresh agreement was entered into, in October 1881, appointing the plaintiff manager of the London office at a salary of 3*l.* per week, with  $1\frac{1}{2}$  per cent. commission on the gross amount of orders received at the London office, and executed and paid for. It was on that agreement that the present action was now brought. He would now draw attention to the pleadings. It was said first that no commission was due, but he should be able to disprove that. Next it was said that if any commission was due, Mr. Boyle was entitled to rely on the counter claim. He would deal with that shortly. But the third, and perhaps the most important plea, was that the defendant was induced to enter into the contract by fraud, and plaintiff was thereby excluded from recovering the  $1\frac{1}{2}$  per cent., having to lose that in addition to the punishment that the law gave him years ago for his offence. Now came the explanation of the defendant's conduct. In July 1882, Mr. Oakley had some overtures made to him by a company interested in some ventilating apparatus. Mr. Boyle had been asked to take over the business of that company, and had been advised by the plaintiff to do so; but for reasons best known to himself he declined. Overtures were made to the plaintiff then, and the consequence was that he gave three months' notice to terminate his engagement. Probably that vexed Mr. Boyle, but he concealed his annoyance, and seemed not to give Mr. Oakley the slightest idea that he would pursue the course he ultimately took. But just before the expiration of the notice the plaintiff applied for a renewal of the testimonial given him in the preceding year, and received in reply a letter asking what firm he proposed joining. No testimonial, in fact, was sent, and in due course the plaintiff left Mr. Boyle, but early in November Mr. Oakley paid a visit to his late employer, and was then told, in effect, that he had been guilty of fraud and all kinds of things, and that he (Mr. Boyle) would take care to let every architect and builder all over the country know who the plaintiff was. Mr. Oakley not unnaturally went to his solicitors, who thereupon wrote to the defendant threatening him with criminal proceedings if he printed libels or slanders upon their client. Mr. Boyle replied, saying that the letter much surprised him, suggesting that the account of the interview was absurd, and stating that if Mr. Oakley thought there was anything due to him (which he denied), he could put it to the test. Thus the matter stood. As to the counter-claim the plaintiff positively denied having taken the gas-regulator agency unknown to Mr. Boyle. He emphatically denied having ever neglected his ordinary work. The plaintiff was promised certain payment for the services he was to render; and on his behalf he (the learned counsel) had to submit that the defendants were not entitled to come there and say that, because of his previous character, regardless of the services he had rendered, he should be still further punished for a past offence by taking away from him his wages.

The Court then rose for the day.

On the resumption of the trial on Tuesday morning, Mr. Richard Banner Oakley was called, and gave evidence corresponding with the statement of his counsel.

The learned counsel was proceeding to examine the witness as to the confidence reposed in him by Mr. Boyle, when Mr. McClymont said they did not complain of the plaintiff's conduct while in their service; they complained that he suppressed his name when they engaged him.

Under these circumstances, Mr. Bigham said he would not continue that portion of his examination.

Mr. McClymont said that he did not think it necessary to trouble the Court with the counter-claim, and he also proposed that his client should agree on a reasonable sum for commission, providing his lordship held the plaintiff was entitled to recover.

Mr. Bigham: The main question is, are we disentitled to recover by reason of fraud?

The Judge: That is rather a question of law. It is suggested he ought to have disclosed the facts of his previous history, but I cannot see how that is an answer to a claim for commission earned.

Mr. McClymont: I have been trying to put myself in your lordship's hands.

The Judge: I cannot help thinking myself that if there is any moral blame in the matter it rests more with the referees than with the plaintiff, for he appears to have been advised by them.

Mr. McClymont: My point is this. My client says that the plaintiff came to him and represented himself as fit for a position of trust; he gave two references as to character and fitness, and



that is an implied representation that he was of the average fitness. My second point is, if a gentleman, who for any reason whatever changes his name, or, as in this case, drops a portion of it, there is an act of misrepresentation. Saying his name is R. Oakley instead of Richard Banner Oakley is what the law describes as fraud, because it is a suppression of a statement by a person when in a position in which he is bound to speak. If I can show that the referees knew who this gentleman was, knew that he represented himself to be R. Oakley, that my client spoke to and treated with him as R. Oakley, then I submit that this is a contract for commission to be paid upon orders executed, and it is not completed until they are executed. The essence of such a contract is this:—I am going to treat you as a person I can trust, confidence is the essence of the contract, and therefore I say that this suppression of fact is fatal to the contract. If that is so, then any claim under the contract is gone also.

The Judge: If there had been any serious damage alleged in consequence of the suppression, then nice questions would have been raised both of law and morals.

Mr. McClymont: You have not heard all about the morals. I have no desire to go into them.

The Judge: I am not using the word in reference to Mr. Boyle. I mean the conduct of the plaintiff and his referees. I think there ought to be good faith in any representation under such circumstances. It is quite clear that the plaintiff had the sanction for his conduct of his two advisers, Sir John Monckton and Mr. Cartwright, but I do not desire to express any opinion on it. In my opinion, with everything you can suggest there is no answer to the action.

Mr. McClymont: I could not ask anything but nominal damages on the counter-claim. I should like to know if I could succeed, in your lordship's view, in establishing my proposition that there was fraud, which voided the contract? If I cannot, I ought not to take up your lordship's time.

The Judge: I think you cannot.

Mr. McClymont: Then I will not press the matter further.

The Judge: There will be judgment for the plaintiff for 70*l.*, the amount agreed upon.

## AMERICAN TIMBER RAFTS.

TWO large rafts of pine logs have been lately brought to Cleveland, being the first floated from Lake Superior. One covers about five and the other eight acres. The larger raft contained about 3,000,000 feet of lumber, and the smaller a little over 2,000,000 feet. There were in both rafts about 16,000 logs, ranging from 12 to 16 feet in length. The rafts left a point on the south shore of Lake Superior, between Grand Marias and Grand Island, about 100 miles west of the Sault, and in a little more than two weeks reached Cleveland. They were made up in two sections each, pear-shaped, and enclosed in booms. Through the rivers the sections were towed separately, and they also went through the rapids in the same shape, without loss or damage. The run is about one mile in length, and the fall in the neighbourhood of 20 feet. The entire distance from start to destination is about 600 miles. The run from Detour was made in fourteen days, the average speed being about 1½ miles an hour.

## PHILADELPHIA.

IN the number of dwelling-houses, stores, shops, and manufactories, Philadelphia far surpasses all other American cities; and, in fact, no city in the world, says an official report, can rival it in possessing sufficient dwelling and tenement houses to afford every family one wherein to make a home. The growth of Philadelphia has been almost marvellous; the number of houses in 1683, one year after the laying out of the original plan by William Penn, was less than 100, while to-day the city contains over 176,000 buildings, to which number thousands of new buildings are being added yearly. The number of stores and dwellings erected in 1883 was over 4,000, or twice as many as were built in the previous year. Of three-storey residences, nearly 1,500 were built in 1883, an increase of 700 over the preceding year. The designs of the buildings are quite a change from the commonplace style of former years; eighty-one factories were also built during the same period.

To convey an idea of the size and importance of this city is almost impossible. It has about 1,600 miles of streets, of which over 900 miles are paved; 352 miles of tramways, 214 miles of sewers, over 700 miles of water-pipe, and about 750 miles of gas mains. Its system of sewerage is unexcelled, which is due in part to its location between the Delaware and Schuylkill Rivers. The healthfulness of the city may be attributed to cleanliness, excellent sewerage, and to the fact that the people are not huddled together as in other large cities.

The greater part of the city is built of the excellent brick for which it is noted. Philadelphia is remarkable for the abundance

of domestic comforts and conveniences, and no city of any considerable size in the world surpasses it in the home comforts it allows the people of the middle classes, many of whom occupy houses of their own. A large part of the city is built upon rented ground, the ground-rent plan as here developed affording excellent advantages to the builder. The construction of houses is also greatly stimulated by building associations, of which there are over 500 in Philadelphia. The value of real estate, according to the assessment of 1883, is 583,612,683 dollars. The city debt is about 67,200,000 dollars, for the payment of which there is a sinking fund of about 29,000,000 dollars.

The public buildings of Philadelphia are numerous, and many of them fine in architectural design. The city contains some of the finest specimens in America. The most prominent are the New Public Buildings or Departments of the Municipal Government, now nearing completion. They are of white marble and granite, covering an area of 4½ acres, exclusive of the courtyard, and will have cost when finished about 15,000,000 dollars, of which sum more than two-thirds have already been expended. The architecture is of the Renaissance, and they excel in beauty and magnitude any public buildings in America.

The new United States Post Office is claimed to be the largest structure of its kind in the world. It is a magnificent pile of granite, costing about 8,000,000 dollars.

The cathedral of SS. Peter and Paul (Roman Catholic) is built of brown stone, in the shape of a Roman cross, and is the finest structure of its kind in the country. The Masonic Temple, situated immediately opposite the new municipal buildings, is constructed of granite in Norman style of architecture, and cost about 1,500,000 dols. The University of Pennsylvania consists of a group of elegant and commodious buildings of green serpentine stone, quarried near the city. The curriculum of this institution is of the very highest grade, and its instructors the best obtainable. Among the other buildings worthy of special mention are—The United States Sub-Treasury and Custom-house, the United States Mint, the Academy of Fine Arts, the Academy of Natural Sciences, and others.

The Girard College, an institution for the free education and maintenance of orphan boys, was endowed by Stephen Girard, a citizen of Philadelphia. The college buildings, constructed at a cost of 7,000,000 dols., afford the best facilities obtainable for boarding and educating nearly 1,200 boys, who, having finished the course of studies of the college, are apprenticed to learn some useful trade or profession. The main building is a massive structure of white marble in Corinthian architecture. The total value of the residuary fund to date, with the par value of securities given, is 10,138,268 dol. 10 c., which includes college ground and buildings and all real estate owned by the trust. The Academy of Music, chiefly for grand operatic representations, is one of the most extensive and perfect buildings of the kind on the Continent, and the opera-houses and theatres of Philadelphia are capacious, handsome, and well constructed. The hotels are superior in their accommodations, and some of them unsurpassed in elegance.

Philadelphia is indeed "a city of homes." The unlimited territory open to improvement, the perfect system of tramways and steam railroad facilities for rapid transit to and from the suburbs, the straight streets extending for miles and constantly lengthening, combine to make it a delightful place of residence for all classes of people; and the productive and highly cultivated country surrounding it renders its markets equal to any in the United States. All these, added to its advantageous situation, have made it the great manufacturing centre of the Union. The rapid growth of Philadelphia and the march of modern progress has not been permitted to interfere to any extent with buildings of historic interest. The city to-day possesses more relics of the past, more edifices of historic fame, than any other in the Union. The oldest of these is Penn's Cottage.

The Old Swedes' Church is one of the most venerable edifices in America. The first church upon the site was erected in 1677, and served both for a place of worship and a block-house, being constructed with loopholes and other appliances of defensive warfare. The present edifice was built in 1700 to take the place of the old one. Christ Church is another relic of the colonial times. It was begun in 1727 and finished in 1754. Its chime of bells is among the oldest on this side of the Atlantic. On the tenor is inscribed, "Christ Church, Philadelphia. Thomas Lester and Thomas Peck, of London, made us all." When the British troops took Philadelphia, these bells were removed to prevent them falling into their hands and being cast into cannon. They were afterwards replaced, and have remained to peal forth music ever since. Washington was a regular attendant at Christ Church when President of the United States, and many of the heroes of the "times that tried men's souls" rest in its vaults.

"Independence Hall," wherein was considered and adopted, and from its portals read, the Declaration of Independence, is situated on Chestnut Street, between Fifth and Sixth Streets. This edifice, the "Mecca of American Freemen," was commenced in 1729 and completed in 1734. It is a rather modest-looking building of brick. Within recent years it has been restored, as far as possible, to the condition in which it was in 1776. The upper floors at present are occupied by the Select and Common



Councils of the city. The "Independence Chamber" contains the table upon which the Declaration was signed, and the portraits of the signers and other revolutionary heroes. The "National Museum" is in the opposite chamber; in it are collected many valuable relics of colonial days, including the original charter granted by Penn to the city of Philadelphia. West's celebrated painting, *Penn's Treaty with the Indians*, may also be seen here. There is no building of so much historic interest outside of this one. In it Washington received his commission as commander-in-chief of the American army, and in it the Articles of Confederation were adopted in 1787. Almost every name and every incident connected with the birth of the nation is associated with this edifice. It is a shrine which hundreds visit daily.



#### An Institute Diploma.

SIR,—May I ask you to insert this letter in your next issue, as the subject of it possess interest to many. I am desirous of agitating in order to obtain from architects generally a memorial soliciting the Royal Institute of British Architects to promote a Bill as early as possible in Parliament, which shall prevent all architects practising unless they have first received a diploma from the Institute, as the oldest recognised body of architects. Such a measure would in the first place further the interest of the Institute itself by giving it a more generally recognised position; secondly, it would materially improve the social position of architects; and thirdly, it would (and this, of course, is the weightiest reason of the three) preserve our English architecture from becoming more debased, by preventing men who have learnt to use their pencils in a carpenter's shop or elsewhere from setting up as architects, when they are ignorant of or at the best possess but a superficial knowledge of the science of architecture or the laws and ages that govern its styles.

Other arts are developing improvement, while this, which Mr. Ruskin justly ranks first, is yearly becoming more debased from allowing uneducated and unqualified men to usurp the name of architect, and erect incongruous, badly-proportioned, and oftentimes unhealthy buildings. Many of the men are ignorant of even the different styles of architecture, for we constantly find Classic and Gothic mingled in the same building. How can builders' clerks, small tradesmen, and, to my personal knowledge, even a railway porter, have received either the education necessary to understand or the means of obtaining such expensive books as are necessary to attain even a minimum of architectural knowledge? Yet these are allowed to adopt a profession equally with those who have received expensive educations, paid large premiums to acquire necessary technical knowledge, and afterwards probably read hard at a sacrifice of health, time, and means, in order to appreciate in some measure an art which embraces so many different kinds of knowledge, and calls into use four out of the five senses mankind is blest with.

Why should it be more necessary to preserve the few from unqualified dentists, than the many from unqualified architects? To quote Mr. Ruskin—"every man has, at some time of his life, personal interest in architecture. He has influence on the design of some public building, or he has to buy or build or alter his own house. It signifies less whether the knowledge of other arts be general or not: men may live without buying pictures or statues, but in architecture all must, in some way, commit themselves; they *must* do mischief and waste their money if they do not know how to turn it to account"—unless they employ competent men.

In this economising age, many who are ignorant of the art employ these so-called *architects and builders*; and, putting on one side the national question for a time, it is most unfair that these men should be allowed to monopolise work and money by encroaching on a profession which ought properly to be confined to those who have made it their especial study. Of course a Fellow of the Institute has some advantage over others who have not attained that standing, because many educated people in London recognise it as a diploma of efficiency; but although people in the provinces understand what M.D. means to a doctor or R.A. to an artist, most of them are ignorant of the meaning of F.R.I.B.A., or even of F.S.A. Country people are slow to understand that there are architects *and* architects, except so far as a display of wealth is concerned.

The suggested measure would *not* debar the really gifted men from attaining success, because the question of articles, which might prove a pecuniary difficulty to some, could be waived; but it *would* prevent men who neither possess a personal love or especial knowledge of the art from practising for the sake of pecuniary advantages.

The Institute has already taken a step in the right direction by

insisting on an examination. Why not follow the example of our continental neighbours, by obtaining an Act of Parliament which shall render it necessary that every architect should possess a diploma of efficiency? It would be a means of improving our national architecture, and at the same time give architects a definite position which at present they certainly do not possess. Of course the best men come to the top in time, but it often means such up-hill work as materially shortens life. How many of our best architects have died in the prime of life! If the work were confined to the profession, incomes would be increased, and the means of obtaining knowledge and experience by travelling more generally enjoyed. I have written at some length, but I hope more efficient and influential members of the profession will take the matter up, and endorse powerfully and tersely what I have so feebly aimed at.

Yours truly,

A. MORDON MOWBRAY,  
Architect, F.R.I.B.A.

Burton Villa, Eastbourne:  
Nov. 3, 1884.

#### Awards for Ventilators at the Health Exhibition.

SIR,—As we are informed that a *select* number of ventilators have been tested by the jury on ventilation, at the late Health Exhibition, for the purpose of assisting them in adjudicating the awards, we beg to state that we knew nothing of these tests until they were completed, nor was our air-pump ventilator included amongst those tested. It appears that our ventilator was not the only one excluded, as several other exhibitors of ventilators were also not invited to submit their ventilators to the tests. The result is that an old-fashioned and out-of-date cowl, which was patented some quarter of a century ago, has been awarded a gold medal; and a revolving cowl, which has proved a complete failure in a large number of cases, when practically applied, has been awarded a second prize. Now, it would be interesting to know *why* so many ventilators, ours amongst the number, were excluded from these tests, seeing that they were all sent to the exhibition for the purpose of competing for prizes.

We are afraid the jury have got themselves into a scrape they will have some difficulty in getting out of, for they may depend upon it that the matter will not be allowed to drop until it has been sifted to the bottom, and the individual or individuals responsible for these, the most extraordinary and unfair proceedings which have ever disgraced an exhibition jury, brought to book and made to account for their unexcusable and most reprehensible conduct.

We understand that the method of making the tests was a farce unworthy of the most ignorant child, the ventilators being placed inside a tube about 8 feet long by 3 feet square, and a blast of air driven on to them by means of a fan: the bottoms of the pipes attached to the ventilators were also inside the tube. It is scarcely credible that such gross ignorance amongst professed scientific men could exist in this the nineteenth century. And these are the men who are appointed as our judges!

Perhaps it may account for why we have been treated as we have, when it is mentioned that our old friend and well-wisher, Mr. J. P. Seddon, formed one of the jury, and this may also perhaps account for that gentleman's friend being awarded five medals.

Yours truly,

ROBERT BOYLE & SON.

64 Holborn Viaduct:  
Nov. 4, 1884.

#### LEGAL.

##### Supreme Court.—Oct. 30.

(Before LORDS JUSTICES BAGGALLAY, BOWEN, and FRY.)

CHATTERLEY v. NICHOLLS.

##### SALES OF LAND.

The question here was whether the informal terms of two letters constituted an enforceable contract for the sale of land. The defendant offered to sell the Westwood Park Estate, at Brentwood, in a letter, stating that he was prepared to offer it for 11,000*l.*, "subject, of course, to approval of the title and the terms of the contract," and to the estate comprising not less than 31½ acres; and in a postscript the defendant added that it must be understood that the offer must be accepted or rejected by a stated time. The plaintiff, in answer, accepted this offer in terms. In the course of a month the solicitors for the two parties agreed upon a draft contract. The vendor subsequently refused to proceed, and the purchaser brought an action for specific performance of the contract alleged to be contained in the letters. The action was tried by Mr. Baron Pollock, who gave judgment for the defendant. The plaintiff appealed.

Counsel for the appellant contended that the letters made a



contract with a condition which had subsequently been performed. The approval of the terms of the contract, which was conditional, was effected by the draft agreed upon by the solicitors.

Lord Justice Baggallay, after stating the facts, said the letters, even with the words "subject to approval of the title," might have made a good contract, but there was a material term left uncertain by the additional statement that the offer was subject to approval of the terms of the contract. Then was the uncertain term made certain by subsequent performance? The solicitors had approved the draft containing the terms, but they had no authority to bind their principals. His Lordship shared Mr. Baron Pollock's regret that advantage had been taken of a trifling want of formality, but as the respondent had not been heard, it was possible that there was a satisfactory explanation. The appeal must be dismissed, with costs.

Lord Justice Bowen very much regretted that he was obliged to come to the same conclusion. The respondent's explanation had not been heard, but it appeared as if he had either behaved badly to the other side or to his solicitor.

Lord Justice Fry was of the same opinion.

#### Sheriff Court, Perth.

BURKE v. TAIT.

EMPLOYER'S LIABILITY.

In this action the plaintiff, who was a labourer, sued a builder for 500*l.* for injuries arising out of the fall of a building on August 12, when there was a great storm. Several men, including plaintiff, were more or less injured while working at the foundation of the new building by the roof and wall of an old close immediately adjoining giving way and falling above them. It was alleged that the accident was occasioned through the close being undermined in the course of the operations, and left in a faulty condition. The action was defended on the ground that Burke was partly to blame himself, and that if the foundations from underneath had been dug out, they had been dug out with his knowledge; and further, that the accident occurred during a severe storm, and might have been occasioned by it. The defendant, however, on the action being raised, offered the sum of 120*l.* and expenses in full of all claims, or three years' wages, and since the case was called the pursuer had accepted that offer. A decree was accordingly given for that sum.

#### Supreme Court of Judicature.—Nov. 3.

(Before SIR JAMES BACON.)

FOSTER, PORTER & CO. v. COOPER.—COOPER v. FOSTER, PORTER & CO.

These were cross actions, the first brought by Messrs. Foster, Porter & Co., warehousemen, carrying on business on the west side of Philip Lane, in the City of London, the second brought by Mrs. Cooper, the owner of the Old Yorkshire Hotel, on the east side of the same street. Both actions asked for an injunction against the respective defendants, to restrain them from interfering with their ancient lights. The houses on both sides of the street were burnt down in the great Wood Street fire in December 1882. The surveyors on the plaintiffs' side were Messrs. Walter Greaves, J. P. Smith, Edmund Woodthorpe, Baker & Wilkinson, and Christopher & White; for the defendants, Messrs. Gruning, Skingle (of Messrs. Farebrother, Ellis & Co.), Chatfield Clarke, and Banister Fletcher.

After a trial which lasted for five days, the Vice-Chancellor dismissed Mrs. Cooper's action with costs, and Messrs. Foster, Porter & Co.'s action without costs.

#### Wandsworth Police Court.—Oct. 30.

(Before MR. PAGET.)

BUILDING IN PRIVATE WAY.

Mr. W. Beale, of Lombard Road, Totteridge Road, Battersea, builder, was summoned by the Metropolitan Board of Works for that, on or about July 26 at Lombard Road, he did unlawfully, without having first given three months' notice of his intention to the Board, and without the sanction of the said Board first obtained, form and lay out a road, passage, or way for building as a street in such manner as not to afford direct communication between two streets, contrary to section 7 of 45 Vict. c. 14.

Mr. Thomas Burton, solicitor, appeared for the Board, and Mr. Lyon, barrister, for the defendant.

Mr. Burton stated that the defendant had erected a block of buildings in Lombard Road, in a *cul de sac*, and, to avoid the above Act, had placed gates at the entrance. The Board contended that all ways formed must have a communication leading into another main street, unless dispensed with by the Board; and that although gates had been erected, the Act applied, and it had been so held in the case of the Board v. Hampton, heard at the July Surrey Sessions, and called the surveyor of the Board and Mr. Pilditch, surveyor of the district board, in support.

Mr. Lyon contended that the Act did not apply, that the way was a private one, and that, not having been dedicated to the public, who would be trespassers if they went over it, the Board had no *locus standi*.

Mr. Paget, in delivering judgment, said that the place being closed by gates, he should hold that this was not a street laid out for the purpose of foot traffic, and therefore that no consent to its formation was required, the more especially as it was not dedicated to the public, and he should dismiss the summons.

Mr. Lyon applied for and was allowed 5*l.* 5*s.* costs.

Notice of appeal was given by the Board against the decision.

### CHURCH BUILDING AND RESTORATION.

**Rishangles.**—The parish church of St. Margaret, Rishangles, has been reopened after restoration. The church is one of the oldest in the county of Suffolk. The work of restoration has been carried out under Mr. Arundell Tagg, architect, by Mr. Grimwood, builder, of Weybread.

**Chatham.**—The ancient parish church is to be pulled down and rebuilt in accordance with the plans of Mr. Blomfield, the cost of the work being estimated at 5,000*l.* The present church holds a congregation of 900 persons, but the accommodation in the new one will be for 750 only, as there will be no galleries in it. Care is to be taken for the preservation of the ancient monuments, of which there are several in the existing church.

**Pembury.**—A Wesleyan chapel has just been opened. The building has been erected by Messrs. Penn, of Pembury, the architect being Mr. S. M. Houghton, of East Grinstead. Accommodation is provided for about 150 persons.

**The New Parish Room** adjoining All Saints' Church, Clifton, Bristol, is fast nearing completion, and on Saturday next the corner, or memorial, stone is to be laid by the Right Hon. the Earl of Devon. The ceremony will be followed by a public luncheon. The architect is Mr. E. Henry Edwards, of Bristol.

**The New Buildings** in connection with the All Saints' Choir School, in All Saints' Road, Clifton, are all but completed, and during the week the ceremony of blessing the building was performed by the vicar, the Rev. R. W. Randall. There was a large attendance of clergy and laity. The architect is Mr. E. Henry Edwards, of 5 Clare Street, Bristol.

### ARCHÆOLOGY.

**Roman Antiquities in Germany.**—A series of excavations have been carried out, at intervals, during the last twelvemonth on the site of an old Roman castle, near Rottenburg, in the Black Forest. The ground plan of the castle has been, at least in its main features, opened up, the course of the outer walls, the position of the doors and gates, the chief portions of the interior buildings, and in some places very considerable remains of the old fabric have been brought to light. During the latest operations some extensive remains without the lines of the castle have been discovered, all the ground plan and foundations being perfectly preserved. Among them is a hypocaustum, or subterranean calefactory, which is in a state of completeness almost unprecedented.

**South American Antiquities.**—The Ethnological Museum at Berlin has been lately enriched by a fine collection of South American antiquities, which had been gathered during many years by Herr Mehring, a German resident in Brazil. The collection is almost wholly composed of objects which have been disinterred from burial mounds and similar places, and includes axes, arrow-heads, lance-heads, all of stone, and generally of most perfect workmanship; monumental stones, earthenware utensils, and some painted pottery. There are two pipes, evidently used for smoking, made of baked clay, the bowls representing caricature faces. Besides these ancient objects, Herr Mehring has also presented to the museum a very numerous collection of modern utensils, weapons, and ornaments, obtained from South American Indians.

**Competition.**—At a meeting of the Llanelly School Board, held on the 14th ult., Mr. E. H. Lingen Barker, of Hereford, was unanimously appointed architect, and his plans for the new school buildings in the Lakefield Road for 750 children accepted. Mr. Lingen Barker's design was placed first in the recent competition by Mr. C. H. M. Mileham, of Essex Street, Strand, the professional assessor appointed by the Board, the following being an extract from his report:—"This design is the work of a skilful planner. It is well arranged, the style simple, and is no doubt the most economical." There were sixteen other competitors from various parts of England and Wales.



## NEW BUILDINGS.

**Kilbarchan.**—A new hall for evangelistic purposes has just been erected, and will accommodate about 500 persons. The hall has been erected at the cost of Mr. Thomas Williamson. The architect was Mr. Louis Shanks, of Glasgow.

**National Liberal Club.**—On Tuesday the foundation-stone of this building was laid by Mr. Gladstone, which is at the Embankment end of Whitehall Place, opposite the Hôtel Métropole. The site has an area of 23,750 square feet, and has been leased from the Crown. From the main entrance, at the corner of Whitehall Avenue and Whitehall Place, a vestibule leads into the hall or principal corridor. To the left of this is a reception lobby, and beyond a postal and telephone office; a second hall leads into the conference-room, which is 38 feet by 34 feet in dimensions. A separate entrance from Whitehall Avenue gives members direct access to this room. A handsome elliptical staircase opposite the main entrance rises from the basement to the first floor. A passenger-lift will afford easy means of reaching the different stages of the building. Below the ground-floor is to be a spacious smoking-room, with a bar, and beyond under the terrace will be a range of billiard-rooms. In the basement also will be provided a boiler-room, an engine-room containing the dynamo machine for electric lighting, and a fresh-air chamber forming part of the system for ventilation. One other entrance is to be added from Whitehall Place under a tower in the north-east angle of the building, for the benefit of such non-members as may be privileged to use the Gladstone library, which will be placed in a room 102 feet in length, 35 feet wide, and 24 feet in height, with shelf space for 20,760 books. On a level with this apartment will also be a smaller members' library, a grill-room, 63 feet by 35 feet, and a dining-room, 38 feet wide by 108 feet in length. From the dining-room there will be access through an open loggia to a broad terrace 30 feet wide overlooking the Embankment. Reading and writing-rooms, private dining-rooms, and a committee-room are among other apartments on the first floor. Upon the second floor are the bedrooms. The structure will throughout be fireproof, the exterior entirely of Portland stone. The estimated cost is 120,000*l.* In style the building is to be Early Renaissance, the most noticeable feature being the tower, which will be 180 feet in height. The architect is Mr. Waterhouse, A.R.A.

## SCHOOL BUILDINGS.

**Stafford.**—The memorial-stones of Primitive Methodist new Sunday-schools, Snowhill, Stafford, have been laid. The site has been obtained by pulling down two cottages at the rear of the chapel, and here will be erected a commodious building, having on the ground floor three good class-rooms and an infant's school-room, and above them, on the first floor, a large school-room. Two vestries are being constructed between the chapel and the new building, and provision is also being made for the lengthening of the place of worship at a future time. The work is being carried out by Mr. W. Pemberton, from the designs of Mr. J. D. Mould, architect.

## ART WORKMANSHIP.

**Stained Glass.**—A window in the Late Decorated style has been inserted in the west gable of the south aisle of St. Margaret's Church, Uxbridge, and filled with stained glass in memory of the James family. The window was designed by Messrs. Charles J. & C. Herbert Shoppee, architects, of Doughty Street and John Street, Bedford Row, London. The stained glass is by Messrs. Clayton & Bell, of Regent Street, the subject being the Ascension. The window is in five lights. The glass to the lower part of the centre light represents the journey to Emmaus; the two to the left "Noli me tangere," and the angels and Marys at the sepulchre; and those to the right the charge to St. Peter and Pentecost. The stonework was carried out by Messrs. Fassnidge & Son, of Uxbridge.

## ENGINEERING WORKS.

**Gridiron Groynes.**—Two groynes, of a form invented by Mr. Dowson, are about to be constructed at Brighton in order to test the merit of the principle. They may be described as a fence of iron hurdles, each hurdle about 5 feet long and 3 feet high, secured to iron stakes or piles driven into the ground. With the exception of the top and bottom rails, the bars of the hurdles are all placed vertically, and have open spaces between them about an inch in width, which (where they are not buried with shingle), allow the water to pass through, and it is thought that by this means the backwash of the waves on the lee side of the groynes will be reduced. The gratings are nevertheless sufficiently close to intercept the travel of the shingle, and the intention is that when the beach has accumulated as high as the top of the hurdles, they should be dug out and drawn up so as to heighten the structure as much as may be thought necessary, the piles or stakes being also heightened or drawn up to a higher level, and this

process is to be repeated until the whole beach has been raised by the repeated accumulation of shingle to such an extent as may be desired. The groynes will be about 200 feet long, and are expected to cost 300*l.*

## GENERAL.

**M. Jacques Galland** has obtained the prize offered by the French Government for a design for a tapestry border to surround four panels, representing the Seasons, and to be executed at Beauvais. M. Galland is a pupil of his father.

**A Picture**, by Mr. G. F. Watts, R.A., *Rain Passing Away*, was purchased at the exhibition at the Manchester Art Gallery for 200 guineas.

**The Midland Arts Club**, Birmingham, opened the winter session, last week by a social gathering of the members. A large collection of works of art by members of the society and others were exhibited.

**The "Art Journal,"** which is to be reduced in price from 2*s.* 6*d.* to 1*s.* 6*d.*, will, in January next, appear in a new cover designed by Mr. Lewis F. Day, who designed also the present wrapper of the *Magazine of Art*.

**The International Exhibition**, in New Orleans, will not be opened until December 16. Applications for space will be received until November 25, and exhibits until December 10.

**A Cast of Aphrodite of Cnidos**, by Praxiteles, in the Vatican, has been added to the gallery of casts at South Kensington.

**The First Commissioner of Works** has stated, in the House of Commons, that the new buildings of the National Gallery are being pushed on as rapidly as possible. The trustees are not in favour of lighting up the galleries at night.

**The Royal Technical School** in Berlin was opened on Sunday. The main building is 665 feet long, 170 feet deep, and 80 feet high, and will accommodate 2,000 students. The total cost has been 340,300*l.*

**The Citizens' Association** of Chicago offer a prize of 500 dollars for the best practical essay on the "Main Drainage, Sewerage, and Water Supply systems of Chicago and its vicinity."

**Mr. Hicks**, architect, of Newcastle-on-Tyne, has prepared plans for an organ-chamber to be erected in the parish church of Newburn, with a new organ as a memorial of the late vicar.

**Mr. W. H. St. John Hope** delivered a lecture on "The First Norman Cathedral Church at Rochester," at the opening meeting of the Maidstone Philosophical Society.

**A New Franciscan Monastery** will shortly be commenced at Upton, Essex; the architects are Messrs. Pugin & Pugin, of Westminster.

**The Tynemouth Town Council** have decided to proceed with an extension of the Fish Quay eastward, at an estimated cost of 27,000*l.*

**The Waghorn Memorial Committee** have decided on erecting a bronze statue at Chatham, representing the pioneer of the overland route in his uniform as a naval lieutenant.

**Messrs. R. Pearse & Co.** have been awarded the silver medal for wrought-iron casements at the Health Exhibition.

**Mr. H. Mitchell**, of Bradford, has offered to contribute 3,000*l.* towards the erection of Sunday School buildings in connection with the Wesleyan Chapel at Manningham.

**The American Elevator Co.** have obtained the order for a second goods lift for the warehouses of Messrs. Elliott Bros., Sydney, N.S.W. It is to have a capacity of 15 cwt., and is to carry a load of nearly 80 feet.

**An Ancient Roadway** of oaken logs, supposed to date back to Saxon times, has been found in course of some excavations at Ipswich. The stratum upon which the oak logs rest is of peaty earth, apparently made up of furze, heather, broom, alder, birch, &c., matted together to the depth of about a foot, and there is probably little doubt that these were laid down to form a road over a swamp.

**An Extra Parliamentary Committee** has been appointed to elaborate the principal conditions of the Paris Exhibition of 1889, and to decide upon its site. The Committee includes the Under Secretary of State for Public Works and for the Colonies, and also the Governors of the Bank of France and of the Crédit Foncier.

**The Glasgow Town Council** propose to borrow 50,000*l.* for alterations and extensions of the Central Police Office, and for the erection of a new police office in the northern district of the city.

**Deep Artesian Boring.**—Chalk has been struck at the depth of 524 feet at a tube-well which Messrs. Le Grand & Sutcliffe, of London, are boring for Mr. R. L. Curtis, at Vange, near Pitsea, in Essex. Much uncertainty existed as to the depth necessary to go to reach chalk in this locality. The London clay extended to 395 feet, and the lower tertiaries are altogether 129 feet thick. It is expected the total depth to be bored to obtain a good supply of water will be somewhere over 600 feet, and at the present rate of progress it is anticipated this will be completed within the next three weeks.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, NOVEMBER 8, 1884.

### CONTRACTS OPEN.

BRADFORD.—Nov. 10.—For Building Post Office. The Postmaster, Bradford.

BRADFORD.—Nov. 17.—For Extension of Thornbury School. Mr. E. P. Peterson, Architect, New Inn Buildings, Thornton Road, Bradford.

COCKERMOUTH.—Nov. 11.—For Rebuilding Brewery. Mr. R. S. Marsh, Surveyor, Cockermouth.

COLCHESTER.—Nov. 12.—For Building Branch Co-operative Store, New Town Estate. Mr. J. F. Goodey, Architect, Victoria Chambers, Colchester.

EBBW VALE.—Nov. 13.—For Building Master's House, Briery Hill School. Mr. L. P. Jones, Victoria Road, Ebbw Vale.

FORDINGBRIDGE.—Nov. 17.—For Building Lodge, Coach-house and Stabling at Highfield. Mr. Fred. Bath, Architect, Salisbury, and 342 Strand, London.

GREAT EASTERN RAILWAY.—Dec. 1.—For Works and General Repairs and Alterations for 1885. Mr. John Wilson, Engineer, Liverpool Street Station.

GREAT YARMOUTH.—Nov. 15.—For Building Two Cottages. Mr. W. B. Cockrill, Architect, Glencoe House, Gorleston.

HALIFAX.—Nov. 18.—For Building Mill and Construction of Reservoir. Mr. C. F. L. Horsfall, Architect, Lord Street Chambers, Halifax.

HINDLEY.—Nov. 19.—For Rebuilding Brewers' Arms Inn. Messrs. H. Walls & Son, Surveyors, 8 King Street, Wigan.

HUNTLEY.—Nov. 14.—For Building Dwelling-house. Messrs. Matthews & Mackenzie, Architects, 255 Union Street, Aberdeen.

IPSWICH.—Nov. 13.—For Drainage of St. John's Home. Mr. A. F. Vulliamy, Clerk to the Board of Guardians, 20 Upper Brook Street, Ipswich.

LEIGH.—For Building Three Villas. Mr. E. Wright, Architect, Alexandra Street, Southend.

LONDON.—Nov. 24.—For Ordinary Works and Repairs to Public Buildings, Hampton Court, Kew, and Richmond District, for 1885. H.M. Office of Works, 12 Whitehall Place, S.W.

MIDDLETOWN.—Nov. 14.—For Building Six Houses, Smythy Brook. Mr. Fred. Broadbent, Architect, Tithe-barn Street, Dewsbury.

NEWPORT.—Nov. 14.—For Erection of Police Buildings. The County Surveyor, 2 Bridge Street, Newport, Mon.

OLDHAM.—For Building Weaving Shed. Mr. T. H. Chadwick, 35 Edward Street, Werneth, Oldham.

OXENTHORPE.—Nov. 14.—For Building Farmhouse at Bents. Mr. J. Judson, Architect, Bogthorn, Keighley.

PETERBOROUGH.—Nov. 10.—For Alterations to Premises. Mr. James Ruddle, North Street, Peterborough.

PLYMOUTH.—Nov. 12.—For Alterations and Additions at Workhouse. Mr. W. Adams, 7 Frankfort Street, Plymouth.

SALFORD.—Nov. 10.—For Fitting-up Two Arches as Stables. The Engineer, Hunt's Bank, Manchester.

SHEERNESS.—Nov. 11.—For Building Seven Cottages, Alma Street. Mr. Copland, Solicitor, Sheerness.

STOKE NEWINGTON.—Nov. 17.—For Enlargement of Sorting Office. H. M. Office of Works, 12 Whitehall Place, S.W.

STRATTON ST. MARGARET.—Nov. 8.—For Building Stables. Mr. William Drew, Architect, 39 Victoria Street North, Swindon.

SWANSEA.—Nov. 18.—For Alterations and Additions to Brynhyfryd School. Mr. E. Sidney Hartland, Clerk to the School Board, 5 Rutland Street, Swansea.

TETTENHALL.—Nov. 17.—For Building Engine-house and Foundations at Pumping Station. Mr. Lyons Wright, Engineer, Town Hall, Wolverhampton.

VAUXHALL.—Nov. 17.—For Building Factory, Stores, Cellars, &c., Bond Street. Messrs. Hilton & Rawlings, Architects, 3 Victoria Street, S.W.

WHITBY.—Nov. 15.—For Alteration to St. John's Church. Mr. Rowland, Flowergate, Whitby.

WHITEHAVEN.—Nov. 16.—For Building Offices and Workshops at Bigrigg. Messrs. Walker & Peile, C.E., Whitehaven.

WIGSTON.—For Building Large Three-storey Factory. Mr. E. L. Miles, Architect, Horsefair Street, Leicester.

WORKINGTON.—Nov. 13.—For Building Twelve Houses at Westfield. Mr. John Moore, Globe Inn, Maryport.

### BRISTOL.

For Building Board School, Windmill Hill. Messrs. J. TREW & SONS, Architects, Bristol.

	A	B
Eastbrook . . .	£8,123 0 0	£8,204 0 0
Lewis . . .	8,075 0 0	8,350 0 0
Forse . . .	8,050 0 0	8,070 0 0
Cowlin . . .	7,554 0 0	7,608 0 0
Krauss . . .	7,456 0 0	7,438 0 0
Gay . . .	7,373 0 0	7,780 0 0
Crocker . . .	7,234 0 0	7,439 0 0
Church . . .	7,149 0 0	7,200 0 0
Rossiter . . .	6,843 0 0	6,855 0 0
Bevan . . .	6,700 0 0	6,750 0 0
HATHERLY (accepted) . . .	6,457 0 0	6,467 0 0

All of Bristol.

For Building St. Agnes' Church. Mr. W. Wood BETHELL, Architect, Queen Anne's Gate, Westminster.

Downs . . .	£10,176 0 0
Humphreys . . .	9,830 0 0
Forse . . .	9,460 0 0
Cowlin . . .	9,427 0 0
Stephens & Bastow . . .	9,000 0 0
Davies . . .	8,690 0 0
Hatherly . . .	8,637 0 0
Gedge . . .	8,527 0 0
Howell . . .	8,427 0 0
Church . . .	8,388 0 0
Lewis . . .	8,365 0 0
J. Wilkins . . .	7,994 0 0
Williams . . .	7,789 0 0
Rossiter . . .	7,717 0 0
WILKINS & SONS* . . .	7,180 0 0
Hayes . . .	7,118 0 0
Bevan . . .	7,100 0 0

\* Accepted on reduced estimate.

### CHEPSTOW.

For Alterations at Gwentlands, Chepstow, the Residence of Mr. F. T. Bircham. Messrs. A. O. WATKINS & SONS, Architects, Newport.

Miles, Newport . . .	£390 0 0
Roberts, near Chepstow . . .	364 10 0
Thorne, Chepstow . . .	361 16 7
PHILLIPS, Chepstow (accepted) . . .	360 0 0
Jones, Chepstow . . .	350 0 0
Haines, Chepstow . . .	315 0 0

### COLCHESTER.

For Erection of Two Pairs of Cottages for the Colchester Co-operative Society, on Lord's Land Estate. Mr. J. W. START, Architect, Colchester. Quantities by the Architect.

Lee . . .	£940 0 0
Shepherd . . .	920 0 0
Farran . . .	840 0 0
Eade . . .	830 0 0
Oldridge . . .	785 0 0
Gladwell . . .	765 0 0
Chambers . . .	765 0 0
Dupont . . .	648 0 0
AMBROSE (accepted) . . .	620 0 0
Diss (withdrawn) . . .	550 0 0

### TENDERS.

#### BIRKENHEAD.

For Building Park-keeper's Lodge, Trauamere Recreation Ground, Birkenhead. Mr. THOMAS C. THORBURN, Borough Engineer. Quantities by the Engineer.

Bleakley & Son . . .	£815 18 0
Ford . . .	723 6 6
Snape . . .	615 0 0
Legge, Son & Co. . .	590 10 0

#### BOURNEMOUTH.

For Building Small Bazaar, Bournemouth, for Messrs. Piercy & Hutchings. Messrs. KEMP-WELCH & PINDER, Architects. Quantities by the Architects.

Stanley, Bournemouth . . .	£1,518 10 9
Huxtable, Bournemouth . . .	1,441 0 0
Jenkins & Son, Bournemouth . . .	1,414 0 0
Stroud, Bournemouth . . .	1,389 0 0
George, Bournemouth . . .	1,350 0 0
Saunders, Southampton . . .	1,335 0 0
Architect's estimate . . .	1,435 17 4

# EASTWOOD & CO. (LIMITED).

## LIME, CEMENT, AND BRICK MANUFACTURERS.

SHOEBURY, COWLEY, & KENT BRICKS IN ANY QUANTITY DELIVERED ALONGSIDE.

Shoebury Malm Facings and Paviers.	Dutch, Adamantine, and Red English	Laths, Plaster.	Ridge Tiles, Terminals, &c.
Stourbridge, Welsh, and Newcastle Fire	Clinkers.	Moulded Bricks of all kinds.	Staffordshire Blue Bricks.
Bricks, &c.	Red and White Suffolk Bricks.	Red, White, and Black Rubbers.	Chimney Pots, Slates.
Glazed and other Drain Pipes.	Greystone, Blue Lias, and Chalk Lime.	Broseley and Yorkshire Roofing Tiles.	Hair, Sand, &c. &c.

# PORTLAND CEMENT

(WELLINGTON BRAND) of Unsurpassed Quality.

Sole London Consignees of Messrs. Gibbs & Co.'s (West Thurrock) PORTLAND CEMENT, and the LUMLEY GLAZED BRICKS.

BRICKFIELDS:—WEST DRAYTON, MIDDLESEX; SITTINGBOURNE, KENT.

WHARFS:—

WELLINGTON WHARF, BELVEDERE ROAD, LAMBETH.

CANAL BRIDGE WHARFS, OLD KENT ROAD, S.E.

CHELSEA WHARF, LOTTS ROAD, CHELSEA.

KENSAL GREEN, HARROW ROAD.

VICTORIA WHARF, MORTLAKE, S.W.; and

BLACK HORSE LANE, RICHMOND.



## CARLISLE.

For Construction of Shed for Girls' Playground at Harraby Hill Workhouse.  
McGuinness . . . . . £51 0 0  
BATY (accepted) . . . . . 51 0 0

## CLIFTON.

For the Formation of a 12-inch Pot Pipe Sewer, for the Outfall of the Sewerage, Clifton, near Kirklees Wood, Brighouse, for the Clifton Rural Sanitary Authority. Mr. R. F. ROGERSON, Surveyor, Brighouse.  
Drake, Hartshead . . . . . £46 10 0  
Lowe, Salterhebble . . . . . 46 3 6  
Jagger, Brighouse . . . . . 39 3 0  
Wells, Norwood Green . . . . . 34 3 3  
Balmforth, Elland . . . . . 33 15 3  
Naylor, Cleckheaton . . . . . 33 0 0  
Gough, Liversedge . . . . . 32 7 0  
Slinger, Cleckheaton (accepted) . . . . . 31 0 0  
Dovenor, Sowerby Bridge . . . . . 28 10 0

## COLWYN BAY.

For Supplying and Laying 5-inch Gas Mains, including Valves, Specials, &c., complete to Colwyn. Mr. F. G. COLLINGWOOD, Engineer.  
Williams, Rhyl . . . . . £410 0 0  
HOLMES & Co., London (accepted) . . . . . 400 0 0  
Dale, Northwich . . . . . 392 0 0  
Hughes, Colwyn Bay . . . . . 379 8 0

## DEAL.

For New Catholic Church and Presbytery in the Blenheim Road, Deal. Mr. FREDK. A. WALTERS, A.R.I.B.A., Architect, 4 Great Queen Street, Westminster. Quantities by Mr. J. F. CAREW, 22 Surrey Street, Strand.

## A.—The Church and Sacristy.

Adcock, Dover . . . . . £2,997 0 0  
Trollope, Lower Walmer . . . . . 2,811 0 0  
Martin, Ramsgate . . . . . 2,746 0 0  
Brooks, Folkestone . . . . . 2,736 0 0  
Wise, Deal . . . . . 2,571 0 0  
Denne, Deal . . . . . 2,445 0 0

## B.—The Presbytery.

Adcock . . . . . 986 0 0  
Martin . . . . . 946 0 0  
Brooks . . . . . 939 10 0  
Trollope . . . . . 921 0 0  
Wise . . . . . 908 0 0  
Denne . . . . . 900 0 0

## C.—The Tower.

Trollope . . . . . 386 0 0  
Brooks . . . . . 382 0 0  
Adcock . . . . . 377 0 0  
Wise . . . . . 376 0 0  
Denne . . . . . 369 0 0  
Martin . . . . . 367 0 0

## D.—Omission of Transepts.

Adcock . . . . . 500 0 0  
Brooks . . . . . 460 0 0  
Trollope . . . . . 454 0 0  
Martin . . . . . 450 0 0  
Denne . . . . . 438 0 0  
Wise . . . . . 412 0 0

## E.—Stone String Courses instead of Brick.

Trollope . . . . . 56 0 0  
Brooks . . . . . 54 0 0  
Adcock . . . . . 47 0 0  
Martin . . . . . 40 0 0  
Denne . . . . . 26 0 0  
Wise . . . . . 25 0 0

## EXETER.

For Cooking Apparatus, Kitchen and Bakery Fittings, &c., at the City of Exeter Lunatic Asylum. Mr. R. STARK WILKINSON, Architect, 14 Farnival's Inn, E.C.

## A

King & Munk, Exeter . . . . . £1,006 0 0 { £773 0 0  
Slaters & Co., Holborn . . . . . 912 0 0 { 608 0 0  
Bradford & Co., Holborn . . . . . 824 0 0 { 724 0 0  
Beynon & Cox, Torquay . . . . . 708 0 0 { 868 0 0  
PRARSE, Exeter (accepted) . . . . . 623 0 0 { 540 0 0  
May, London . . . . . 490 0 0

## A As specified. B Alternative.

## FLEETWOOD.

For Building Shops and Business Premises, in East Street, Fleetwood, for Mr. Thomas Walmesley. Mr. C. FRANKSON SHAW, Architect, 37 St. Peter's Place, Fleetwood.

## Excavations, Drains, Brick and Slating Work.

Jackson, Fleetwood . . . . . £340 0 0  
Jones, Fleetwood . . . . . 323 0 0  
ROSKELL, Fleetwood (accepted) . . . . . 315 0 0

## Joiners' Work.

HOLDEN, Fleetwood (accepted) . . . . . 95 15 0

## Masonry.

Nickson, Blackpool . . . . . 50 0 0  
Chambers, Fleetwood . . . . . 44 0 0  
JOHNSON, Fleetwood (accepted) . . . . . 33 10 0

## Plastering.

Dewhurst, Fleetwood . . . . . 60 0 0

## Painting, Plumbing, &amp;c.

Walmesley, Fleetwood . . . . . 75 10 0

## GILLINGHAM.

For Foundations of Assembly Rooms and Offices, Gillingham. Messrs. MARGETTS & Co., Architects, Chatham. Quantities by the Architects.

Brass, London . . . . . £2,453 0 0  
Shaw, London . . . . . 1,780 0 0  
Heaven, Strood . . . . . 1,764 0 0  
J. L. Trueman, Luton . . . . . 1,653 0 0  
Ames, Strood . . . . . 1,543 0 0  
J. H. Trueman, London . . . . . 1,467 0 0  
Hocking, Strood . . . . . 1,460 0 0  
Honey & Nye, Gillingham . . . . . 1,330 0 0

## HORSHAM.

For Building Mission Hall at Faygate, Horsham. Mr. WILLIAM BUCK, Architect.

Redford, Horsham . . . . . £348 8 0  
Ookenden, Crawley . . . . . 333 0 0  
Beach & Miriam, Horsham . . . . . 325 0 0  
Peters, Horsham . . . . . 269 0 0

## HALIFAX.

For Private Improvement Works, Rookery Lane, Halifax. PATERFIELD (accepted) . . . . . £132 18 0  
Kendall . . . . . 116 12 10  
Thomas Street South.  
HUDSON (accepted) . . . . . 92 4 0

## LEICESTER.

For Proposed Mission Hall and School, Mere Road, New Evington, Leicester. Mr. W. S. BURTON, Architect. Quantities by the Architect.

Walker . . . . . £937 15 0  
Ellingworth . . . . . 943 0 0  
Marston . . . . . 937 0 0  
Tyers & Yates . . . . . 924 0 8  
Riddett . . . . . 921 0 0  
Barnett . . . . . 920 0 0  
Duxbury & Son . . . . . 913 0 0  
Tyers . . . . . 910 0 0  
Mason . . . . . 905 0 0  
Cunningham & Palmer . . . . . 897 12 0  
Holmes . . . . . 886 0 0  
Woodcock . . . . . 883 0 0  
Johnson . . . . . 870 12 0  
Richardson & Son . . . . . 868 0 0  
Stephens . . . . . 865 0 0  
Elliott . . . . . 859 17 6  
Hallam . . . . . 817 0 0  
Bass . . . . . 800 0 0  
WRIGHT (accepted) . . . . . 800 0 0

## LIVERPOOL.

For Heating the Constabulary Station, Muirkirk, N.B.

## RENTON GIBBS, Liverpool (accepted).

For Erecting Patent Warming Apparatus, at Emmanuel Church, Holloway, London.

## RENTON GIBBS, Liverpool (accepted).

For Heating Apparatus for Mr. F. S. Swinnerton, Hanley.

## RENTON GIBBS, Liverpool (accepted).

For Heating, with Hot-water Pipes, Messrs. S. White & Co.'s Offices, Temple Street, Liverpool.

## RENTON GIBBS, Liverpool (accepted).

For Heating the Wellington Inn, Waterloo Road, Wolverhampton.

## RENTON GIBBS, Liverpool (accepted).

## LONDON.

For Repairs to Nos 1, 2, and 3 Joiner's Place, Westminster Bridge Road. Mr. ALFRED WRIGHT, Architect.

Riches . . . . . £195 0 0

For Repairs to Nos. 22 to 31 Joiner Street, Westminster Bridge Road. Mr. ALFRED WRIGHT, Architect.

Buchan . . . . . £511 18 0

For Construction of Sewer in Holland Street and Gordon Place. Mr. W. WEAVER, C.E., Surveyor, Kensington.

Rogers & Dickens . . . . . £453 0 0  
Mears . . . . . 445 0 0  
Killingback . . . . . 390 0 0  
Felton . . . . . 389 0 0  
Mayo & Co. . . . . 380 0 0  
Nowell & Robson . . . . . 357 0 0  
Cooke & Co. . . . . 332 0 0

For Road Improvements at Hammersmith, Fulham District.

Mears . . . . . £1,459 0 0  
Allred . . . . . 1,382 0 0  
Bendon . . . . . 1,352 0 0  
Rogers & Dickens . . . . . 1,348 0 0  
Tomes & Wimpey . . . . . 1,247 0 0  
Nowell & Robson . . . . . 1,190 0 0  
Carter . . . . . 1,189 0 0  
Coat . . . . . 1,154 0 0

For the Erection of Business Premises, in Bermondsey Street, Southwark, for Messrs. F. M. HUDSON & SONS, under the Superintendence of Mr. William Eve, 10 Union Court, Old Broad Street, E.C.

Boyce . . . . . £2,450 0 0  
Downs . . . . . 2,264 0 0  
Shepherd . . . . . 2,225 0 0  
Shurmer . . . . . 2,079 0 0  
Harris & Wardrop . . . . . 2,074 0 0  
Salt . . . . . 2,065 0 0  
ALDRIDGE & JENVEY (accepted) . . . . . 1,900 0 0

For the Erection of Medical Superintendent's House, Lodge and other Works, at the Western Hospital, Fulham, for the Managers of the Metropolitan Asylum District. Messrs. A. & C. HANSTON, Architects, 15 Leadenhall Street, E.C. Quantities supplied.

Hammond . . . . . £4,800 0 0  
Hill Bros. . . . . 4,258 0 0  
Gould & Brand . . . . . 3,985 0 0  
Smith & Son . . . . . 3,978 0 0  
Johnson . . . . . 3,898 0 0  
R. & E. Evans . . . . . 3,885 0 0  
Sanders . . . . . 3,798 0 0  
Balham Bros. . . . . 3,591 0 0  
Howell & Son . . . . . 3,570 0 0  
Potter . . . . . 3,530 0 0  
Feltham Bros. . . . . 3,530 0 0  
Dickeson . . . . . 3,496 0 0  
MAGEE & Co. (accepted) . . . . . 3,350 0 0

## MARKET HARBOUROUGH.

For Street Improvement Works, Market Harborough. Mr. F. D. CLARK, Engineer.

Stevenson, Eckington . . . . . £411 16 10  
Finnejan, Northampton . . . . . 371 16 4  
Jones & Fitzmaurice, Birmingham . . . . . 369 1 6  
Smith, Little Bowden . . . . . 332 8 11  
Bassitt, Market Harborough . . . . . 273 12 3  
MUSSON & Co., Leicester (accepted) . . . . . 242 15 8  
Engineer's estimate . . . . . 332 15 9

## MOULTON.

For Restoration of Moulton Church. Mr. E. LAW, Architect, Northampton.

Henson, Finedon . . . . . £5,051 0 0  
Beardmore, Northampton . . . . . 3,825 0 0  
Gee, Daventry . . . . . 3,730 0 0  
Martin, Northampton . . . . . 3,550 0 0  
Ward & Saxby, Irthlingborough . . . . . 3,276 0 0  
ROBERTS, Weedon (accepted) . . . . . 3,247 0 0

## NEATH.

For Construction of Reservoir, Laying Water Mains, &c., Neath. Mr. W. EDMOND THOMAS, Engineer, 58 Water Street, Neath.

T. Jones, Neath . . . . . £551 0 0  
Hilton, Swansea . . . . . 454 0 0  
Pickthall & Sons, Merthyr Tydfil . . . . . 450 0 0  
Wilcocks & Herbert, Resolven . . . . . 422 0 0  
W. Jones, Neath . . . . . 410 0 0  
Hoskins, Neath . . . . . 390 0 0  
PAUL, Rhondda Valley (accepted) . . . . . 326 0 0

## NENAGH.

For Laundry and Drying-room at Workhouse Hospital, Nenagh.

Sheridan, Parsonstown . . . . . £240 0 0  
McGrath, Nenagh . . . . . 217 0 0  
DOVEY, Nenagh (accepted) . . . . . 212 0 0

## NEWPORT.

For Villa Residence on the Stowe Park Estate, Newport. Messrs. A. O. WATKINS & SONS, Architects.

Bowers & Co., Hereford . . . . . £1,850 0 0  
Prosser, Newport . . . . . 1,829 0 0  
Moulton & Browncombe, Newport . . . . . 1,770 0 0  
Miles, Newport . . . . . 1,748 0 0  
Martin, Newport . . . . . 1,595 0 0  
Fonse, Bristol (accepted) . . . . . 1,580 0 0

## NORTHAMPTON.

For Building Villa Residence, The Avenue, Northampton for Mr. Pickering Phipps, M.P. Mr. EDMUND LAW Architect, Northampton. Quantities by the Architect.

White . . . . . £2,054 0 0  
Woodford & Son . . . . . 1,825 0 0  
Emery . . . . . 1,824 0 0  
Heap . . . . . 1,797 0 0  
Cosford . . . . . 1,790 0 0  
Hawtin . . . . . 1,762 0 0  
Dunckley . . . . . 1,760 0 0  
Martin . . . . . 1,740 0 0  
Green Bros. . . . . 1,700 0 0  
Beardsmore . . . . . 1,685 0 0  
Hickman . . . . . 1,658 2 0  
Ireson . . . . . 1,657 0 0  
Watkin . . . . . 1,595 0 0  
REYNOLDS & SON (accepted) . . . . . 1,550 0 0

## PONTYPRIDD.

For Building House, Llantwit Fardre, Pontypridd, for Mr. Richard Male, Solicitor, Pontypridd. Mr. JAMES LLOYD, Architect, Pontypridd. Quantities by the Architect.

Griffiths . . . . . £2,914 0 0  
Meredith . . . . . 2,782 0 0

## PUTNEY.

For Alterations and Additions to the London Rowing Club House, Putney. Mr. GEORGE A. DUNNAGE, A.R.I.B.A., Architect, 5 John Street, Adelphi. Quantities by Mr. C. L. CADNEY, 57 Moorgate Street.

Knight & Sons . . . . . £2,361 0 0  
Chamberlain Bros. . . . . 1,958 0 0  
Langdale & Hallett . . . . . 1,923 0 0  
Smith . . . . . 1,902 0 0  
J. & P. Hermon . . . . . 1,792 0 0  
Avis & Co. . . . . 1,767 0 0  
ADAMSON & SONS, Putney\* . . . . . 1,730 0 0

\* Accepted subject to certain reductions to be arranged.

## REPTON.

For Building School and Class-rooms, Repton, for the Charity. Mr. ARTHUR W. BLOMFIELD, Architect.

Quantities by Messrs. Gardner, Son & Theobald.

Lovatt . . . . . 10,357 0 0  
Thompson . . . . . 8,984 0 0  
Foster & Dicksee . . . . . 8,880 0 0  
Dove Bros. . . . . 8,825 0 0  
Stephens & Bastow, Bristol . . . . . 8,700 0 0  
Slater, Derby . . . . . 8,105 0 0  
Walkerderine, Derby . . . . . 7,800 0 0  
Lilley & Sons, Ashby-de-la-Zouch . . . . . 7,728 0 0  
Hodge, Burton . . . . . 7,350 0 0  
Lowe & Son, Burton . . . . . 7,290 0 0  
Walker & Slater, Derby . . . . . 7,000 0 0

## ROMFORD.

For Construction of Sewers at Romford, Concrete (2,000 yards), Brick (200 yards), and Pipe Sewers (10,900 yards), Engine-house, &c. Messrs. BRUNDELL, SIMMONS & BRUNDELL, Engineers, Doncaster.

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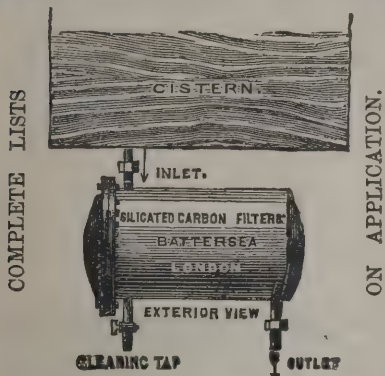
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# The Architect.

## A DIPLOMA FOR ARCHITECTS.



HERE are certain questions in the architectural world, as elsewhere, which come up periodically for debate, and one of these is already well known, and ought by this time, one would think, to be well understood, by the name of the diploma question. It has been, indeed, so often considered that many will say it needs no further discussion. But nevertheless it is a subject which—at least up to the present time—however frequently and perhaps inconveniently it may claim to be taken up afresh, we cannot afford to treat with-

out respect; for the object in view, no matter what may be thought of its feasibility, is an honourable one. The urgent letter of a correspondent, which we printed last week, brings the proposal for a "diploma" once more before the profession, and perhaps may be said to do so in such a way as to represent, as well as ever has been done before, the practical rather than theoretical arguments which are relied upon by the advocates of the measure.

Our correspondent is an architect in practice at one of the most thriving of our popular seaside towns. He is a full member of the Institute of Architects, writing F.R.I.B.A. after his name for the last three years, and frankly claiming consideration for the title. Here is precisely the sort of person who is likely to complain of the want of such consideration, and to put the case in a way that is wholesomely suggestive of the attitude of those whose competition in business compels him to remonstrate. It is just in such a town as Eastbourne that the "architect and builder" flourishes to the advantage of the builder and the detriment of the architect. It is here that the cabalistic initials of Institute membership are emphatically not understood. It is here that "builders' clerks, small tradesmen, and even a railway porter" are "allowed to adopt the profession" of an architect, not only without rebuke, but, what is more, with "a fair field and no favour" in the rivalry of business. CARLYLE says somewhere that the King is the *canning* one, the man who can; and, in such a secluded little kingdom as this, what is to prevent the railway porter—once "at the bench" we should suppose—from asserting a right to be a king architectural *if he can*? Mr. MOWBRAY says "an Institute diploma," backed up by an Act of Parliament, ought to prevent him: and that is the question.

It is almost a pity that our correspondent goes so far out of his way as to quote Mr. RUSKIN; but it is fortunate for the present argument that the poet's observations are not very much to the point. Of all influences in the world, the advocacy of Mr. RUSKIN would probably weigh least with a hard-headed House of Commons in promoting the success of "a Bill which shall prevent all architects practising unless they have first received a diploma from the Institute." Neither is the writer so happy as could be wished in the too sober explanation which, in this Ruskinian connection, he gives of architecture, as "an art which calls into use four out of the five senses mankind is blessed with;" these being, if we may hazard a guess, the senses of sight as regards art, hearing as regards acoustics, feeling with reference to matters of bodily comfort, and smell in things sanitarian. But, apart from these trifling exaggerations of sentiment, the issue which is raised is a fair and intelligible one, and, as such, is entitled to be discussed once more.

Now there are two perfectly distinct questions involved in this issue, if not three, as our correspondent puts the case. First we are called upon to say why the works of building which are executed for the general public of a country like England should not be compulsorily graceful, in homage to that advancing taste which is now coming to be recognised as a public principle. Secondly, we are required to consider how far the same works of building should be allowed to be improperly planned, constructed, lighted, warmed, ventilated, and drained, to the detriment of the health, comfort, and convenience of the inmates. Thirdly—if such be intended—we are to say whether it is not for the advantage of the public interest that a profession of specialists, expensively educated for their

specialty, should be "protected" (as the phrase goes in economic science) in the practice of their business; but this we may pass by.

The general or miscellaneous answer to all such questions is that this is a free country, in which every man is allowed to earn his living as he honestly can. But (say the objectors) is it honest for one to earn his living, or rather another man's living, by pretending to know what he does not know? Speaking broadly, the answer is that, in the eye of the law, it is honest. But is not this particular eye of the law its blind eye; what, for example, of the doctors and the lawyers? Well, even the blind eye of the law has sight enough to see that a bad doctor will kill the body, and a bad lawyer kill, in a manner, the soul; and therefore these are exceptions excepted. Then what about dentists? Mr. MOWBRAY's argument about them is a mistake; the "railway porter" may change from architect to dentist to-morrow, no man but his patients daring to make him afraid. So also with the Church; any man may preach who can get a congregation. So also with the art of war; any one who will enlist, and is worth enlisting, may have his bellyful of fighting. And so, likewise, any one may paint portraits if he can find sitters; or produce statues if he can get people to buy them; or fiddle to his heart's content if any one will listen. Even in organ-grinding of a purely philanthropic character we draw the line in the most timid and dubious way.

To come to particulars, ought England, in the first place, to recognise architectural fine art—let us say some reasonable amount of academical grace in building—as a matter of public policy, so as to forbid the exhibition of that which is offensive to some sort of public taste? No doubt, if building affairs could be so managed in the interest of general enjoyment, that everything should be pleasing to the eye of the wayfarer, the sum of the national gratification would be largely augmented; and, if this happy consummation could be only but partially accomplished, of course the people would so far unquestionably benefit. Then (say the advocates of the diploma) let the Government at any rate do what can be done towards so good an end, and give to educated experts some kind of authoritative recognition or license which to uneducated inexperience shall be refused. That there is something in this no one can well deny. Accordingly, Government gives to the Royal Institute of British Architects a charter; the Institute gives to examinees a certificate; is it really affirmed that this certificate is worthless?

Secondly, how far can public authority interpose for the prevention of unintelligent construction? As regards health, we need not observe, a great deal is being already done. But it is only through the instrumentality of public officials; and the adoption of any scheme of personal license for professional practice seems quite impossible. Here again, academical examinations exist in plenty, sometimes almost in rivalry; and, amongst the rest, the Institute of Architects has recently begun to act up to the occasion.

But there is a wide difference in any case between a certificate of competency from an examining body, and a statutory license from the public authorities; and, under the policy of government which is universally accepted in England, this difference is even wider than it would be in some other countries of Europe. Perhaps it may be right to say that the apathy of the English public with regard to academical degrees is one of their weak points; and that the French, for instance, with their worship of distinction in the form of *gloire*, and the Germans with their appreciation of it in the more mathematical or quantitative manner, are so much in advance of us practically that the precise value of every man of any intellectual mark may be estimated by all about him from the diplomas he can produce. In other words, we may admit that a professional man in France or Germany is able to satisfy the public that he is an expert, as distinguished from a pretender, by referring to documentary evidence which is understood by all persons of education, whereas the same man in England would find his certificates, however numerous they might be, regarded as little else than ornaments to his character which he ought to be able to dispense with. It is the consciousness of this state of the English mind, probably, that forces the advocates of prohibitive legislation for the architectural profession to fall back upon such a resource. But it must be manifest to all who have their eyes open to what goes on in the Legislature that an Act of Parliament which would prohibit the employment of an architect who failed to



show a license to practice is a thing not to be thought of. The desired "diploma," therefore, must be identified with the certificates which we already possess, amongst which the title of membership in a professional guild is probably the most available of all; and the appreciation of such a guarantee must be left to the advancing intelligence of the public. People's apathy, after all, is not so very great as to render membership of the Institute of Architects, as a matter of rank, of no value whatever; and, for the rest, the possessors of such rank who wish to turn it to legitimate account must learn how to do so for themselves. The hint is at least worth offering that one of the best means of accomplishing the object is the establishment of local architectural societies, if only for the purpose of excluding pretenders; another is the encouragement throughout the provinces of the extension of Institute membership and Institute examination.

## M. ZOLA ON PAINTING.

[BY A CORRESPONDENT.]

IT would be vain to deny that the name of EMILE ZOLA is held in dis-esteem in England, and probably some apology is needed for recognising him as an authority on art, or on any subject that is not connected with the life described in his novels. The question, however, is what amount of truth is there in M. ZOLA's theory of art? and in considering it one is not called upon to condemn or to approve of the series of books in which the natural and social history of a family under the Second Empire will be found. Son Excellence EUGÈNE ROUGON is a personality partly drawn by the help of imagination, and we can compare the creation with those of other novelists; but EDOUARD MANET was a living painter, over whose works many a battle was fought in Paris. Even if M. ZOLA slandered Imperialism by showing its fruits in ROUGON, that is no reason why his eyes and his judgment should be at fault when he described the pictures of MANET which were kept out of the Salons. So many men have laid down the laws of æsthetics, we need not grumble if a French novelist adds a volume to the heap. Several men will follow his example who have given less thought to the subject.

M. ZOLA was born in Paris in the April of 1840, and eighteen years afterwards he began the battle of life on his own account in the city. His aspirations were towards poetry, and, strange to say, towards philosophical poetry. He was an embryo LUCRETIUS, and might be classed with the young men of genius whom he describes as having a love of the Enormous, a continual want of the Infinitely Grand. But even in Paris the Muse will not preserve her votaries from hunger, and M. ZOLA was sometimes forced to turn fowler in his garret and ensnare the sparrows on the roof. He had other expedients. There is no bread in the world that is so dry as the Paris bread when one is forced to make it the sole staff of life, but M. ZOLA got over the difficulty by steeping it in oil. Loaves must be paid for, and, like many a scholar from the days of CLEANTHES, he was forced to keep his bed when his coat was in pawn. If M. ZOLA had lived *au premier*, he might have persevered in efforts to reach a hazy sublimity; but the sight of the housetops of Paris is enough to make any man a realist, especially when the spectator has hunger for a companion. So M. ZOLA abandoned the Infinite, and resolved to be a *prosateur*. His first sacrifice to materialism was the acceptance of employment in a publisher's shop. Then he wrote stories and novels, and in course of time was made famous.

When M. ZOLA startled the decorous world there was a risk that French literature and art might fall into a stagnant condition. Respectability was advancing to so high a position in the State that even wit was afraid to meddle with it. But as Eastern poets have become wearied of the everlasting monotony of the heavens, and have expressed a desire to see the stars strewn in new ways, so in Paris and in sight of the Tuileries there were men who grew dissatisfied with the extension of authority, and were unthankful when they saw how authors and artists could be moulded into tools as easily as prefects. M. ZOLA was one of the disaffected. Fashionable painters who drew inspiration from the Court, and approved of imperial face powders and millinery professors, who taught the safest doctrines, juries, critics, the public itself were all condemned by him. Not only was the Emperor declared to be unqualified to become

the biographer of JULIUS CÆSAR (who, according to some, was a kindred genius with His Majesty), but the ancient and modern authorities who had so benevolently laid down the laws for artists were regarded with irreverence. "La science du beau," wrote M. ZOLA, "est une drôlerie inventée par les philosophes pour la plus grande hilarité des artistes." Is it any wonder that such a writer did not gain renown at once?

In the former generation the contest between the Classic and Romantic men was an effort to substitute one party for another. It did not follow that all the combatants were brave or were worthy to take part in the warfare. In those cases organisation becomes *la puissance des impuissants*. M. ZOLA has been as much opposed to one side as to the other. He is the champion of individualism in art, and therefore both Classicists and Romanticists are his enemies. A realist himself, he wishes to see realism in pictures; not, however, the photographic accuracy which goes under that name, but rather such a treatment of a subject as will denote fidelity to the artist's own conviction of what is true. A painting should, according to him, be characteristic of its author not by its mere mannerism (which might mean its departure from nature), but by its power to express the strength of his insight. No two men see things in the same way, and M. ZOLA would be the last to expect that the representations of inanimate, much less animate, nature by several artists should have the correspondence that would be seen in the plates produced by an equal number of photographers.

There are accordingly two factors in M. ZOLA's system of æsthetics, which allow of no meddling with them. They are Nature and Man. TENNYSON says that knowledge is but what we see, and M. ZOLA would give a similar definition for art. It is the world which is about the artist that should form his source of inspiration. Hence M. ZOLA is as much opposed as MR. RUSKIN to the system adopted by the late GUSTAVE DORÉ, whom he looks on as a magnificent improvisatore, who lived in an ideal world, and was always ready to produce work without a thought of nature. DORÉ abandoned the use of the living model, and eventually, however hard he might try, he could not be realistic. His drawings of London life are as far removed from nature as his scenes in fairy-land. He had more or less fitness to undertake the illustrations of DANTE and MILTON, but, according to M. ZOLA, he should have waited for a long time before undertaking the Bible. Giants and dwarfs, fairies and demons, vegetation of an ultra-tropical character, in a world which has been subjected to extraordinary convulsions, an architecture which is independent of laws of construction, all these things were produced without effort. But his hand could not embody a representation of any character for which a human being cared, and consequently there were many books which he was incompetent to illustrate. Scenes of pageantry, fables, and that class of subject which is described in the North as "uncanny," were all within DORÉ's range, but with MOLIÈRE or GOLDSMITH he was out of his element. M. ZOLA says that DORÉ's talent consisted mainly in his peculiarly picturesque dramatic imagination. By a rapid intuition he was able to seize the most interesting point of an event, and what was dominant in character. His mind was obeyed by his hand, which drew figures almost as quickly as they were imagined. But there was a limit to his dreamland. Things were either seen in an atmosphere of delicate, subdued light, or under sombre shadows. The infinite variety which realism affords was almost unknown to him. M. ZOLA, therefore, implored DORÉ to turn more to nature if he wished to do justice to his own genius.

The qualities in which M. DORÉ was deficient are strongly marked in the works of EDOUARD MANET, who might be called the god of M. ZOLA's idolatry. The founder of the Impressionist School found some admirers among picture buyers, but we doubt if any of them has been able to see the beauties in the artist's works which are apparent to M. ZOLA. In the first place, there was a sort of sympathy between the novelist and the painter. Both were described as black sheep. The story is told of a journalist who was introduced to MANET in a café, but who looked around, as he was unable to believe that the modest, somewhat dandified, little man near him was the terrible fellow who was supposed to shock the proprieties. Then, again, MANET was so often attacked that it seemed as if the whole established world of art was in arms against him. "It is a struggle," wrote M. ZOLA, "between an artistic temperament and the crowd, so I attack the crowd, for I shall be always on the side of the vanquished." In this case he was prophetic.



MANET obtained some followers among artists who were young and clever, and his influence has not died with him, but the pictures which draw the biggest prices are not in the Impressionist manner, and are not entirely realistic.

M. ZOLA maintains that, while the artistic temperament is variable in every individual, Nature remains constant. Why should the artist abandon truth for the sake of conventionalism? Every great artist should be, as it were, a translator, and express what he sees according to his own personality. What interests me as a man, says M. ZOLA, is humanity, and it is the recognition of humanity that gives interest to a painter's work. Accordingly we find him admiring MILLET, but turning aside from CABANEL. One had sympathy with his subjects, the other regarded them with the coldness of official eyes. M. MILLET was a peasant, who used the brush instead of the flail. M. CABANEL was the representative of a system which had emperors and kings for patrons. The *Venus of Milo* is a fine figure, but who would care for the statue if it had been produced by a machine? Is it not almost as mechanical if we know that the sculptor was only the product of a system of training?

M. ZOLA's teaching lies open to the objection that in his search after realism and individuality he is indifferent to beauty. He judges of pictures too often from a novelist's standpoint. Any one who has frequented the vapour baths of Paris, knows that there is a vast difference in physique between Frenchmen and Englishmen. In Paris there are far more figures which are badly formed. A corpulent shopkeeper might delight the eyes of a Japanese caricaturist, but a sculptor who had copied ordinary models would turn aside. Yet however ungraceful their contour may be there is plenty of character among those men, and consequently they are of interest to a novelist like M. ZOLA. It does not follow that traits which can be turned to account in verbal descriptions are equally well adapted to be depicted on canvas or recorded in hard marble. M. ZOLA admits that French people are neglectful of the exercises which give strength and beauty to the human frame, but somehow he fails to recognise the fact that an imperfectly developed form cannot be attractive to an artist, unless he is in one of those strange moods when, as in the case of LEONARDO DA VINCI, even disease cannot be passed by. There is little of the spirit of humanity in the pictures by M. DUBUFFE or M. GÉROME, two artists of whom M. ZOLA does not approve; still the most realistic painter cannot fail in his heart to appreciate the graceful lines which make up the figures.

From what we have said, it will be evident that M. ZOLA is a zealot. He sees one side of the shield and maintains there is no other. He would impose his theories of literature on painters and sculptors, and probably on architects. Like all men who are in earnest, he has done good, and French pictures are more often than formerly tested by truth to nature in form, colour, and subject. But from fear of objections, imagination is often pinioned; and instead of painting whatever is exalted in life a French artist very often has recourse to the commonplace incidents in porters' lodges and fourth-rate cafés. M. ZOLA's theories deserve attention, but it would be unwise to set up a man who confesses that he cannot tell whether a form is correct or not as the only infallible authority on painting.

## THE ARCHITECTURAL ASSOCIATION.

THE second ordinary meeting of the Association was held on Friday evening, the 7th inst., Mr. Cole A. Adams, president, in the chair. A vote of thanks was passed to the various firms who had lent exhibits on occasion of the opening conversation. Mr. J. D. SEDDING read a paper on

### The Modern Architect and his Art.

In approaching the consideration of the modern architect and his art I feel, to use Mr. Lowell's recent words, that there is little chance of beguiling a new tune out of the one-stringed instrument on which we have been thrumming so long. Without, however, affecting to say anything new "where everything has been said before, and said over again after," I desire to draw attention to a view of our art which has been singularly neglected, and which, to my mind, deserves infinitely more prominence than any words of mine can give it.

What I have to say about modern architecture refers not so much to its archæological triumphs, its teeming types and annual revivals, nor to anything that therein is, but to that therein is *not*. So, also, what I would say about the modern architect refers not

so much to his wide knowledge, his daring anachronisms and matchless manipulations of historic ornament, but to his shortcomings—not to how he bewitches the general public by what he is, and what he could do if he tried; but to how the intelligent public may fairly be disappointed by what he is *not*, and what he cannot do. In a word, it is as to the scope—or perhaps I should say the limitation—of modern architecture and the ideal of the designer (if he have any) to which I wish to draw your attention.

There is, I am aware, some danger attached to the criticism of a close profession like that of architecture, which has a royal charter dating from the 7th year of William IV., and which knows how to consume its own smoke. As, however, my point of view is quite an impersonal one, and my remarks general, and as I come before you without a single half-brick in my pocket to heave at anybody, my harmlessness is manifest. I shall then speak my humble mind with all the directness I can command, and trust to your kindness to take no offence where no offence is intended.

It is idle to shirk disagreeable questions, and so I begin with a simple proposition which covers much of the ground we shall traverse to-night. Is architecture, as practised by the modern architect, worth living for? It is a question I have more than once asked myself, but I am not candid enough to confess to you what reply I gave to it. In placing it thus in the forefront of this paper, let me say that the very last thing in my mind is to propagate doubt in the fold of the faithful where none exists; or to shake the confidence of such practitioners as are satisfied not only with the prospects of modern architecture, but with their own prospects and with the worth of their own contributions to the great volume of immortal art. To my mind the question is most suitable to the present time. I will not say that a "crisis" is approaching in the affairs of architecture, because the phrase has lost all its potency by frequent repetition in the newspapers, where we understand that a "crisis" occurs in national affairs every second day. But I will say that these are critical times for us. A strange calm has come. There is a sense of impending change. This is a time of felt uncertainty, of stranded purposes, of searchings of heart—a time when the issues of things connected with the arts of design are hanging in the balances. This is a time, too, of disillusionising alike for architects and for people, when we ourselves are not quite so confident about our method of pushing architectural design forward by means of impulses of an essentially fleeting nature, and when people are beginning to realise that every branch of architecture is well represented by outsiders, and when they are beginning to question the *raison d'être* of the architect at all.

This question is, then, a practical one, and one which it is desirable to face and to answer. It at once puts the modern architect and his art in their right place. It makes us compare ourselves not with ourselves (which is not wise), but with the masters of old who brought trained powers, sleepless ambition, and passionate devotion to their work. It has this good effect, moreover—it at once breaks the spell of that direful boia-constrictor of art, mere professionalism. Yes, and in addressing it to the Architectural Association I cannot forget that I am speaking to those to whom the destinies of English design are to be committed, and it is for you to ask yourselves how you view and how you estimate the art you follow—whether you look upon architecture as a divinely inspired art that can rightly claim all the devotion of your being, or whether you take up architecture merely as an honourable profession and a gentlemanly calling. If you take up architecture as your vocation, to be followed with the ardour of a religion, I am not sure that you will succeed in gaining riches or fame; you may have to be happy with small opportunities and small gains, and have to live a life of quiet, unnoticed worth. But you will be happy and contented and grateful all the same. If, on the other hand, you go in for architecture as a profession which only needs the efficient handling of a T-square and ruling-pen, you may, if you are a good, steady fellow, rise to be an eminent practitioner. And if you are a successful practitioner your rewards are great: you may have access to the best society and to the best columns of the *Times* newspaper; you may be a lion at evening crushes, and wear brown velvet; you may pose as the patron of the very Fine Arts, and be a judge of *bric-à-brac*, and a connoisseur of Queen Anne teapots, Chippendale chairs, and such like; you may even hope to be the F.S.A. and the F.R.I.B.A., and even the P.R.I.B.A., if you have paid your subscription and are alive when your turn comes. Nay, if as architect and surveyor you have a sufficiently large and lucrative city practice and have time for such things, you may aspire to reach the souls of the people by the art of your tongue as well as by the art of your hand, and almost succeed in adding M.P. to your other titles. And to win these rewards you have only to be a rough-and-tumble ordinary man of the world, with a head on your shoulders, an eye for figures, a well-supported air of general competency, good business qualities, some power of gracious fooling, and the faculty of turning out just what the world expects from you with promptitude and despatch. But as for art, and the mastery of the crafts, and the power of colour and form and all that sort of thing, you may neither have any, nor need your friends ever suspect that such things come within the make-up of the modern British architect!

Of course it is ever the snare of enthusiastic youth to press



inconvenient speculations home, and it is because I am in the presence of the aspiring fledglings of artistic gifts and good parts who form the Architectural Association, that the question as to the innate worth of modern architecture comes before me. In another place—where the birds are not only fully fledged but have feathered their nests, and, like Jeshurun, are not exactly able to soar—I dare not hazard it, nor you either. Let it not be supposed that I have low opinions about architecture, or that I would willingly shake the allegiance of any young heart that has found peace in its pursuit. Let no waverer be downhearted; there may be a lucrative future before him. Let him stick to his last, by which I mean his T-square and ruling-pen.

To proceed. I said just now that this question touching the worth of modern architecture as a serious life's pursuit puts our art in its true place. Instinctively one feels that while it is applicable to the modern architect and his art, none but a fool would have put it to William of Sens, Jocelyn of Wells, Alan of Walsingham, William of Wykeham, Thomas Chard of Glastonbury, or of Bramante, Michael Angelo, Christopher Wren, Inigo Jones, or Adams or Chambers, and there must be a reason for this.

Again, none but a fool would ask the modern musician, or the sculptor, or the painter or poet if his art were worth living for. Indeed, here are living arts, each with its ideal conception to symbolise, each with its mission to stimulate, delight, and console mankind, and to raise men's minds out of money-grubbing grooves into a less selfish, less sordid, less commonplace atmosphere. It is significant that in each of these cases the artist is his own craftsman; he thinks his own thought, clothes it himself, and spares no pains in the elaboration of the clothing. He keeps no ghost, and if he does he is not thought to be respectable. But the architect's ghosts are legion—on his premises and off them—and he is not one whit ashamed. In calculating the place and mission of the modern architect, one is reminded of what is happening in the bee-world just now. By the aid of an ingenious patent, ready-made cells are stamped out in wax (adulterated of course) of the correct shape and size, and when placed in the patent hive the bees forthwith complete the cells and fill them with honey. And the very counterpart of this is happening in the human world; the royally-instituted architect makes the cells, and the decorators and manufacturers fill them with honey. You know quite well that the English people have not to thank the British architect for the poetry of their homes. You know that one of the noblest provinces of architecture, that of turning necessary articles of daily use into works of art, has fallen from the architect's hands. You know that all the pretty things that dignify modern life come from "the largest furnishing establishments in the world" in Tottenham Court Road—from those homes of champagne and shoddy where the red sealing-wax "Early English" furniture, and the wood coal-boxes adorned with roses and daffodils, and the cast-iron over-mantel china-closets come from; where you may get a dozen very cheap high-class native oil paintings at one counter, and a dozen very dear native oysters at another.

Again, we must confess that the other contemporary arts I have enumerated have been affected for the better and not for the worse by the influences of the day. Each has won new triumphs, each has found out new chances of appeal, new domains for display. But not so architecture, for while it has gained nothing it has lost nearly all. In respect of the use of iron for constructive purposes and of patent sanitary appliances, which builders and sanitary engineers have devised for us, we score something. Yet, however blessed the iron joists and D-traps are, and however lucky we are to be able to use them, the architects of old, who knew them not, were infinitely more accomplished all-round men than ourselves; and I do not know that, after all, our houses are either more stable or more sweet and wholesome for body and soul to inhabit than the old homes of old England.

But further. The practice of these arts of colour, sound, form, and word directly conduce to the development of artistic genius; nor could you be a successful composer if you had no musical genius, nor an eminent literary man without literary genius. Yet you can be accounted an eminent architect, and reap all the honours of the profession, without possessing or feeling the want of artistic genius.

In putting the case thus strongly, do not suppose that I am blind to the noble gifts and genius of certain architects working with us and shedding their helpful influence amongst us at the present time; and, but for my resolve to keep this paper impersonal, I would name them and speak of them with all the genuine admiration and respect I feel for them. Do not mistake me on this point; I speak of rank and file, and not of these. And I ask whether architecture as now practised ought not rather to be accounted as a "useful" than as an "ornamental"—or, as some would call it, a "fine"—art? I ask whether architecture can any longer be termed the "Queen of Arts," when all that remains of her is the skull and the feet and the palms of her hands?

I ask if it be not true that architecture has ignominiously resigned her throne, lost her honours, and bartered the sceptre of pre-eminence with which she has held sway from time immemorial, and only reserved for herself the sovereign right of levying a tax of 5 per cent. on other men's labours? I ask whether it is not true that the engineer has (whether civilly or uncivilly it matters

not, as the thing is done) robbed the architect of one-third of his domain on the one side, and whether the decorator and manufacturer have not between them robbed him of another one-third on the other side? I ask whether the architect of to-day is, or need be, anything more than a paper-draughtsman to sit on a stool and invent new sorts of doors and windows? I ask whether his business in life is not that of a designer of shells of houses for decorators and manufacturers to finish and furnish, and who varies this jackal occupation by occasional jobs for an engineer, who hires him to do the "pretty" upon a bridge or railway-station? Yes; and such of us who like to see iron skeletons clothed in shoddy ornament may, after refreshing our bodies, refresh our souls at the York or Bristol railway station, and realise at the same time the mission and scope of the modern architect and his art.

Now if you think that what I am saying is approximately true, you will agree with me that it is high time the position of the modern architect and the issues of his art were overhauled; and when this shall be undertaken, I know no better place for the investigation than under the roof of the house which contains the royal charter granted expressly to a certain institution for the advancement of architecture and the various arts and sciences connected therewith. If it be for the better advancement of the arts and sciences that architects abstain from personal relations with them, then it must be granted that they are, with much self-denial and self-abnegation, fulfilling the obligations of the charter under which they are enrolled. However this may be, I cannot help saying that, to my mind, every celebration of the Institute commemorates not the marriage but the divorce of architecture from the arts and sciences connected therewith. I have laid before you evidence of this in what has already been said, and it would be easy to go on multiplying the proofs. Indeed, it is an undeniable fact that the arts and sciences which of old were ever indissolubly connected with architecture, have passed to the care and conduct of the specialist and the manufacturer. The British public goes to its shops and specialists for any matter connected with domestic art; and if you are a parson with wants, you go to an ecclesiastical shop, and while one shopman is fitting on your coat, or taking the shape of your parsonic head for a new stiff hat, you can be ordering of another shopman a sculptured reredos, an altar and font and lectern, and that sort of thing. Yes, and I saw a striking letter the other day, written by the head of a well-advertised carving establishment, which stated that, inasmuch as not more than half a dozen of the writer's architect clients could prepare their own details in an artistic manner, he had started an office and a staff of clerks to do for the architects what they could not do for themselves. And remember that the architects here referred to were of the Gothic school, which represents the best masters of detail. Even in the matter of building houses, the better sort of builder has his own staff of draughtsmen (or compiling copyists, as some would call them), who can invent new sorts of windows and doors, and draw convenient plans, and make pleasing combinations of coloured materials after the approved fashion. The public may soon begin to inquire wherein the architects' clerks and the builders' clerks differ. The State, as you painfully know, has a very summary way of dealing with the architect, inasmuch as it entrusts its buildings to the engineers and officials of South Kensington, and maintains an office of salaried draughtsmen for carrying out public architectural works. And what is happening at Kensington, where engineers combine with ornamentalists to carry out the State's architectural works, may happen in other cases; for the public will see that, given a good builder, an engineer, and an ornamentalist, any building is possible. And the architect has only his own sloth and incapacity to thank for a state of things which in process of time will assuredly work his own extinction. The experts he has called into existence have silently undermined his position. He called in aliens to help him in his need, and the alien army is a standing menace to his position, and will in time dispossess him. Lacking science and lacking art, he is just nowhere if the scientist and the artist combine for his effacement. There is a good deal of what Mr. Ruskin would call professional "bow-wow-wow" talked at our conferences and in the journals about the rights and wrongs of the profession; but what cares the world about the architect so long as its wants are somehow supplied? Although we abuse it, the world is fair in this respect, it values us at its own valuation of our worth. It knows we keep ghosts, and it makes no nicely-drawn distinction between an "expert" and a duffer!

But in order to clear the way for some few practical observations I must arrange the subject under three heads:—(1) What is architecture, and what were the functions of the architect in old days? (2) When, and from what cause did the change from the old to the new system take place? (3) Is it possible for architecture under its present conditions to be carried out upon the old lines, and, if so, by what means? Here are three points, each of which would serve as a theme for a long lecture, so that my treatment of each must needs be brief and simply relative to the matter in hand.

As to the first point, although addressing a professional audience, I cannot define architecture as building erected after an architect's design. One might as well say that the snuff-maker



was the final cause of the human nose! There is building which is, and building which is not, architecture; and I would define architecture as imaginative building: in other words, building which expresses the invention or imagination of the builder, and which appeals by this means to the imagination of the spectator. If it is to answer to the description of architecture, the building must have a soul as well as a body. The body is the structure answering to the primary purpose of its erection, and this body should be stable and convenient. The soul is that superimposed something extra to the body—that something which is provided beyond the demands of mere utility, and which is really the expression of the builder's thought and his mode of appeal to the sympathy and imagination of the spectator. In this definition you get the three cardinal virtues of architecture represented, namely, stability, which relates to science; convenience, which relates to good sense; and beauty, which relates to taste.

Naturally, the primary purpose of a structure, combined with other like conditions, settles its character and the fit extent of its decoration; and yet, while it is quite fair to define the word architecture as the art of building nobly and ornamentally, you cannot gauge the value of a structure by the amount of its ornamentation. Dance, who built old Newgate, was an architect, and, although his structure has dead black walls of rough-hewn granite, relieved only here and there with niches and statuary, and a savage repellent air, it is imaginative building, and speaks directly to the imagination of the spectator of violence and doom in the true grim Northern manner. A mere builder would have put plain brick walls. And architecture all the world over has the same characteristic qualities—however different the types and the styles of the art represented, however different the scale of the structure, however different the culture and aims and methods of the builders—the architecture carries the impress of thought or invention, or imagination befitting an ornamental art. Architecture is truly a human art, a volume and record of human thought. As long as the structure remains, you connect with it the memory of the men who built it. For instance, the monumental art of the west front of St. Albans Abbey is a more lasting memorial of its reputed father—our only British architect—than the cracked bell at Westminster. And so with other immortal specimens of other immortal artists, “soft-handed” or otherwise. As you look at the architecture of Egypt and Greece you associate it with its authors. The work is steeped in thought, instinct with invention, and—so far as its ornament is concerned—eloquent of pleasurable labour. It represents problems of proportion. Ideas are expressed with mathematical accuracy. In Greek art we have, as I need not remind you, the science of building united with accuracy of design and execution. The arts and sciences are here united perfectly. The tide of tradition is represented in full volume, and the designer is the exponent of traditions that commenced in Egypt, and flowed onward through the Greek and Roman and every other period till broken by the Gothic revival.

As I have just said, the architecture of the modern world answers, in all essentials, to the architecture of the ancient world, however different its aims, and character, and mode of appeal. With regard to the latter point, the Classic is a more intellectual art, and demands a more intellectual appreciation. The Greek architect is a man of complete culture, learned in philosophy and geometry, and he addresses his peers. This explains why it is that some of us find the heights of Classic art cold, and the atmosphere that surrounds it bleak and grey. The modern architect, like the ancient, is the right man in the right place; and, whether he be cultured or uncultured, prince or ploughman's brother, he is the most skilled man in the building crafts upon the job. The difference is that, being a Christian, he is no respecter of persons, and being a modern he is no respecter of calculated academic rule, but speaks his thoughts simply and spontaneously, and addresses his art both to learned and unlearned, to rich and poor, to bond and free.

But now, as I turn aside to define the functions of the architect under the old system, I at once feel the ground shake beneath my feet. For who can forget the storm of 1874, after Mr. Fergusson's unfortunate deliverances in the *Quarterly Review* upon this very head? The story of that time affords, I think, a really valuable glimpse into the secret motives of the British architect. The veil lifts for a moment, and he stands revealed with the touchstone of his art in his hand. Directly the elevated position, the professional status and social level of the architect is threatened from below, an army of “soft-handed gentlemen” rush to the rescue. Never in the annals of art (or the history of the Institute, which is the same thing) had so much power of eloquence, so much literary talent, and so much genuine enthusiasm been evinced. The British workman was supposed to be on the march to Conduit Street to demand enrolment as a Fellow of the Royal Institute, and to be, in this way, there and then constituted into an architect; and, although under the pressing exigencies of the case the parish beadle from the neighbouring church, in all the majesty of his Sunday clothes, had been hired to watch the portals of No. 9, and although the Fellows had constituted themselves into a vigilance committee, in day and night relays to guard their Magna Charta, something dreadful might have happened had the

threatened invasion taken place. After all, however, the “un-emanicipated” British workman stirred not, but abode in his breeches, where I will return to him anon. Looking back at the pitiful affair (and the literature of the episode is innocently printed in the Institute's Transactions “by order of the Council”) I have only one remark to make, namely, that whereas the architects were preposterously alarmed lest the workmen should become architects, it never struck them to try themselves to become master-workmen, and so to gain the respect of the workshops by their own eminence in the crafts rather than by giving themselves airs because of their professional status and soft hands.

Luckily for me, it is immaterial to our purpose to inquire as to the social status of the architect as a person, or whether he had soft hands or hard. One thing is certain about him—cultured or not cultured, hodsman's cousin or not—he contributed the requisite amount of knowledge and theoretical science, and did not retain experts; he was in direct contact with the work as it grew up; he saw how things were done, and was not the mere figurer of details at an office; he was the familiar spirit of the building, and not the distant dictator of its details. And besides having a general knowledge of handicrafts, he was master of at least one. Some architects were modellers, some carvers, some workers in marble or in gold or in ivory, and, plainly enough, we can infer that they worked in workshops, and not in offices or studios. “In Greece,” Winckelmann says, “the best workman in the most humble craft might succeed in rendering his name immortal.”

Let us turn for a few moments to Italian Mediæval art, for we know so much more about the architects of Italy than of those of any other country, and they afford us a ready type of men whose functions covered every matter pertaining to construction and ornament. The Italian architect was engineer, builder, painter, decorator, sculptor, modeller, metal-worker, goldsmith, and the rest; or at least you might expect that the same man could paint a picture, carve a subject, draw and model a bit of ornament, make a gold casket or an urn, design a dress or a fabric, build a church or a palace or a bridge. Thus we see how wondrously the arts were interwoven and technical skill was diffused in Mediæval Italy. One craft overlapped the other; there was no hard and fast line of demarcation between them as with us, and no professionalism, and no Salvation Army of specialists behind the scenes. Naturally, the poor Italian architect had never heard of the Native Asian, American, African, and other styles so familiar to our classes of design; but, had he professed to design any sort of building, he would not have left it to the expert to fill it with plaster-work or marble or wood inlays, or bas-reliefs and colour devices; and his art would extend to the provision of gorgeous chests and furniture, and perhaps even to the dresses and portraits of his esteemed clients. Think of Da Vinci, with his superb power of colour and form, of his magnificent designs and projects in art and mechanics, and set this man with his marvellous range, his almost superhuman grasp of mind and boundless ideal, against our puny selves poring over our D-traps, and ventilation, and quantity-taking, Metropolitan Building Acts, &c., &c.; and if, after instituting the comparison, you are satisfied with the scope and issues of the modern architect and his art, then I think you are eligible to be a Fellow of the Institute without further ado, and I will give myself the honour of proposing you on the first convenient occasion.

Now you cannot properly account for the high condition of Italian art in the Middle Ages by saying that the Italian people are a phenomenal people with art in the blood. If so, art would be flourishing in Italy at this time, and it is not. The fact is, that whatever art you examine of any period, or of any country, you will invariably find that the excellence of the work is only commensurate with the ideal. There is no luck, no chance about it, it is a simple matter of cause and effect; and if the members of the Institute had as high an idea of architecture, and of the various arts and sciences connected therewith, as they have of the privileges of the profession and of their professional status, English architecture would be very different to what it is. It needs no prophet to foretell that so long as the modern architect contents himself with grovelling views and consumes his soul in small things, so long will he grovel and do small things. In Italy in the Middle Ages there was a grand ideal to animate the artist and to sustain his art. Of course many things conspired to favour art there and then, beyond the consanguinity with artistic races which doubtless had its effect. Italy was then what England is now—the world's emporium, the seat and centre of the world's commerce. There was wealth, and the desire to spend it upon beautiful things. There was the ambition of cultured nobles. There was the inheritance of fine traditions. There was a lovely climate and a flowery land. There was the innate passion for beauty of a passionate and beautiful people. But what raised Italy to her high-water mark of art was the measureless value set upon execution. What Winckelmann said of Greece is equally applicable to Italy—the best workman in the most humble craft might succeed in rendering himself immortal. The designers themselves were masters in the crafts they dabbled in, and they had technical knowledge and technical skill. “Design” then meant something more than it at present does in an architect's office, or in our classes of design. It meant the power to *do* as well as to *draw*. It meant executive power and technical skill. It



meant that what the brain of the man could conceive, that the hand of the man that conceived it could execute.

Coming to our second point. We have to inquire when and from what cause the change from the old to the new system of architectural practice took place. And here we must come back to our own country again, first, because we are speaking of English art, and secondly, because a similar change has not come over the architectural practice of other countries. I will begin by saying that the old system had lasted in the world generally from the building of the Tower of Babel to the time of the Gothic revival. Ever since English architecture was English architecture, it had been born and bred and fostered and propagated in English workshops. The Gothic revival meant not only confusion to architecture, but death to the art of the workshop. I do not mean for a moment that the art of the workshop, or the craft carried on there were of a high order before the inauguration of the new condition of things, but I speak of one system of design as opposed to the other. How could the arts of design flourish then, when, from the king on his throne to the merchant on his stool, no one cared one dump for art? Why the very life of art, its sinews, its flesh, and its bones is the living thought it contains, and the living interest it creates. If there were no demand for literature, language would not be cultivated. If there were no dancers, the piper would cease to play. Will the crafts develop their cunning if there is none to order and none to heed? It was not patronage only that was wanted, but employment. People, when they are uncomfortable about the results of the Gothic revival, are fond of pointing to Gower Street as a justification for the annihilation of traditional art. But you may depend upon it had there been the demand for higher things there would have been the supply. However homely, or, if you like, however ignoble, the art done just before the new stimulus came, the traditions of the better times still lingered on in the workshops, and the bricklayer, the carpenter, and the plasterer who hung on were men with some notion of style and some love of detail. The early Queen Anne had its leanings towards the picturesque Elizabethan, and the houses of the period are singularly well adapted to English minds and English scenery, and their fittings are in nowise unworthy of the best traditions of the English workshop.

I have purposely made this digression in order that I might insist upon the fact that so long as the traditional art remained in force, and the workshops were the nurseries of design, so long the old scope of architecture, and the connection of the architect with the crafts were maintained. And, while on this point, let me remark upon the significant fact that while certain architects still adhered to traditional art, English architecture gained no advantage by their adhesion; nor did they themselves strike oil, and for the simple reason that, like the Goths, they swamped the traditional art of the workshop with their new-fangled types and rolls of details prepared by the soft-handed clerks in their offices, and accomplished the complete strangulation of traditional art. So it comes to pass that the tale of honoured names of English architects passes on to Pugin, Barry, Scott, Street, Butterfield, Shaw, Pearson, Bodley, and Philip Webb, and leaves them—shall I say?—inconspicuous in the crowd.

But I have yet to account for the decay of architecture before the Gothic revival, and also for the change from the old to the new system of architectural practice; and the explanation I offer for the one applies to the other. I have shown how low the arts had fallen at the beginning of this century through neglect, and I cannot see that you could expect that art should engage men's attention when you remember the vast number of social, political, and religious problems that were then agitating England. Professor Seeley's valuable book on the "Expansion of England" has helped me to see why the faculty for design died out with us in the eighteenth century, for he shows how entirely English interests were then centred in America and her other colonies. Think of the war-ships that had to be built, the armies to be equipped, the colonies to be fought for and occupied, and, later on, think of the machine-looms and steam-engines to be invented and perfected, and the railways to be made! How naturally does the engineer spring into existence amid the demand for the useful arts! How naturally does the eye of the historian pass on to the record of that noble set of engineers, mechanists, and mathematicians—Davy, Watt, Cavendish, Arkwright, Herschell, Stephenson, and Brunell! And how natural that the men of genius should gravitate—not to the ornamental arts as in earlier days, but to the useful arts! Yes, one may well say that English science had produced a perfect vacuum long before the scientific investigator had discovered the way for himself, and that in an unsuspected direction.

And now, having considered the origin of the engineer, who is one of the cuckoo intruders in the architect's nest, let us turn to the origin of that still bigger bird—the ornamentalist or expert in the decorative arts. I said just now that the Gothic revival had inaugurated the change from the old system of architectural practice to the new.

Before this revolution of taste took place the architect was the leading spirit of the building he designed, but he did not stand alone. His designs or models for stone, brick, iron, wood, and plaster work were backed by the traditional skill, and

types, and methods of craftsmen, each of whom was more or less of an artist. The architect was only the prime minister: the workmen represented the departments. He was only the president for the time being of a little republic of art. From what we know of Wren, Inigo Jones, and the Chambers and Adams, the architect was conversant with every branch of the work included in the structure. He supplied the plans and sketch-elevations, and the leading details (as in John Thorpe's case), but the hundred and one odd details required for after-thoughts and emergencies might fall to the conduct of the workman, who, at all events, would be quite competent to deal with them, if so required. Here, then, we have architecture carried out under the best auspices—where architect and workmen are in perfect sympathy in matters of taste, where the designer has a fellow worker in the handicraftsman, where one craft helps and overlaps the other, the executive and the theoretical go hand in hand like twin sisters, the structural and the ornamental proceed along the same lines, and we have building which deserves the name of architecture.

The Gothic revival upsets all this harmony of procedure, for the whole of the traditions of the past must be sacrificed, and new types, mouldings, traceries, carvings, groinings, decorations, and the rest of it are introduced, about which the workman knows nothing and cares less. From henceforth you must look no more to the English workshops for the inception of types and evolution of ideas. The old *Téméraire* of English art having been sent to her last home, a bright new Venetian gondola takes her place, and rides proudly out to sea with seven Gothic lamps at her prow, an Oxford graduate and a few able enthusiasts to work the oar, fire off the guns, and take care of the cargo of sketch-books and romantic literature on board. Naturally the gondola is first attracted to Venice, but as time goes on the taste of the crew changes, and you find them flying about in all directions, and bringing home valuable spoils in the shape of numberless new sorts of doors and windows to offer at the feet of a grateful people. And the merit of the new types consist in this, that they are quite unique in England, and that the British workman cannot move a step, as he copies them, without full-sized details of every part.

Now my explanation of the origin of the specialist decorative artist is this. Having destroyed the old system of art, the Gothic revivalist found himself unable to construct a new system that would work; he had accepted a task which he was unable to cope with. He had a strong love of art, a true sense of the intimate relations of the lesser arts with architecture; but he found things too much for him, and, instead of raising an army of fellow-labourers in the workshops, he called into existence certain specialist assistants to aid him in the conduct of his practice, where he lacked time or ability to carry out the work himself. The mischief of the whole business has been that he was only a learner himself all the time he was carrying out works in various styles. He has been only a blind man leading the blind. He was up a tree all the time himself, and the specialist has been found an indispensable help in supplying his necessities.

I come now to my third point. Is it possible for architecture under its present conditions to be carried out upon the old lines, and if so, by what means? To the first division of this point my short answer is—No and Yes. No, if the present conditions are to remain unchanged. Yes, if things change for the better. In dealing with the whole matter before us I do not want to arraign modern art for difficulties inherent to it, nor do I want to multiply the responsibilities of the architect. That some of the higher branches of an architect's work have been abandoned is undeniable; and I plead for the recovery of these at any cost. In claiming this I do not desire to extend the radius of the architect's proper work. I am even arguing for the lessening of his labours by bringing the handicraftsman into a more active participation in the work he has to do. This was the old system, and it is the only practical solution of the case.

The question is, to what extent our present difficulties are inevitable or irremediable. I have no hesitation in putting at the head and front of our difficulties this of having to employ revived styles. Any suggestion that you or I can make which will indicate some way of mitigating our sufferings in this matter will therefore be a boon. We are in for the use of all the various phases of the various periods of architecture, extending from the thirteenth to the eighteenth centuries, in England and abroad; and when it is remembered that the giants of the past had all their work cut out to master the capacities of one style only, the vastness of our task is appalling. Every post brings us in a request from this quarter or from that for details of buildings which may each be of a different style. Add to this that one must keep touch with the progressive science of the day, and must be able to speak authoritatively of all the rival "sanitary specialities" and rival ventilation and warming schemes and electric lights, and hygienic rock and asbestos and American joinery, and the scores of dodges for minimising art in the workshop, and girders and lifts, and "Acme" or "Imperial" this, and "Eclipse" or "Last for ever" the other—to say nothing of having to pronounce offhand upon Metropolitan Building Acts and having to wade through surveyors' quantities and builders' accounts—is it any wonder if the architect gets so tired out with the business side of his work that he gladly leaves



the problem of art-production and ornament to the specialist decorator and manufacturer?

You will observe, too, that at conferences and in presidential addresses and that sort of thing, where it is necessary to speak cheerily and respect the feelings of the profession at the same time, the architect has invariably only one sovereign remedy to suggest—one patent salve is to heal all our disorders—and that is the specialist. The specialist, either inside or outside of the profession, is to ease everybody and everything all round! The proposal is that there shall be a sort of inner circle of the profession. The profession is to keep a paddock for the prize animals, who are to be warranted to have only one gift each, and who are to run round the paddock in a given groove all their lives. And all the sectionally-gifted persons are to make up one entire concrete architect, on the principle of making a quilt if you have enough patches to cover it.

I grant you that, according to the present state of things, specialists must exist to do such things as these—to superintend the imitation of old work; to carry out decoration in a given style, Pompeian, Egyptian, Classic, or Gothic; to restore or build Gothic or Classic churches; Elizabethan, Jacobean, or Georgian houses, and the like. The question, however, arises here—Are we to go on imitating the styles of the past? Specialists are necessary if we do go on in our present courses; but if we are to get out of the mists and on to the hill-tops again, we must train ourselves for our future liberty. If we want to perpetuate chaos and will-o'-the-wisp art, I do not know that we can devise a better means to that end than the establishment of representatives of the rival styles and rival trickeries of the day. But surely we do not want practitioners of one accomplishment or one idea! Surely we do not want to ruin and degrade the noble art of architectural design by introducing into it that miserable division-of-labour system which (as Mr. Morris points out) has in the case of our manufacturers reduced the workman to a machine, effaced his individuality, taken away all the pleasure of labour, and destroyed the standard of excellence. The making of architectural design deserves a better system of procedure than the manufacture of a modern pin! Let us, then, listen—no, not for a moment—to the bewitching suggestions on this head! The disorder of modern architecture is too deep-rooted to be remedied by the quackery of a specialist. We will not allow the great factory and machine system introduced in the great art that has fallen to the care of our unworthy hands. Let us rather take courage and look forward to the time when the jumble of styles will be cleared away or reduced to system, and prepare ourselves for an all-round practice in our vernacular that is to be. Depend upon it that it will not be the one-eyed, or one-legged, or one-armed, or one-idea'd specialist practitioner that will then be sought for, but it will be the architect with the most individuality, the most culture, the most skill, the most efficient training, that will be sought for, and found most useful to the architect of the future.

But you may well now remind me of my promised suggestion of the means I would propose to bring about the redemption of the old ideals of our art. First, I would say, let architects determine at all costs to recover lost ground. Secondly, let architects endeavour to render the types now in vogue more malleable for nineteenth-century use in our workshops by classification or otherwise, by which means new traditions may be established, and the standard of excellence raised to something of its old pitch. In regard to the first point, some of us have grown too old in naughty slothful ways to hope ever to accomplish much in the personal manipulation of the handicrafts, but we are none of us too old to determine, God willing, that our younger brethren shall have better chances than we had at their age, better chances for modelling and drawing ornament, and for taking their share in the design of house-fittings and the like. None of us, moreover, are too old to help to dignify the labour of the workman whose dusty clothes soil the best Sunday-go-to-meeting coats of the members of the Royal Institute of British Architects, as they accidentally come in contact with him in the builder's yard. We are none of us too old to help to establish new traditions for the workshop, by classification of types and features done in such a way that they may appeal to the workmen in a more practical, familiar, and lovable way than they do now.

May I divert your interest for one moment from that all-important matter, the modern architect and his art, and ask you to look at the British workman. What is his condition? What are the issues of his life's work? What have you done for him? We left him in the eighteenth century, a magnate according to his personal qualifications in his little parliament of art, the workshop, evolving architectural types, and putting his whole soul into his work. In those days he was an intelligent being, following his craft joyfully because he excelled in it, and knew what he was about, and had a felt-place in the world. You have scattered those workmen, you have dissolved these little republics of art that in old days held sway in every town and village in the land, and what have you put in their place? You have drowned the English handicrafts by opening up the sluices of a ceaseless tide of archaic types, and how has your eclecticism affected the British workman? Certainly you have with a vengeance directed his eyes to the wonders of old art, and have given the charm

of novelty to his every-day occupation; you have introduced him to a very Pandemonium of tit-bit types; you have shown him how various have been the doors and windows in the buildings of past days; you have muddled his ideas and confused his brain, but you have done nothing to form his taste or settle his standards; you have added not one single pet moulding to his tool-chest, nor helped him to pigeon-hole a single familiar feature; he has no lasting impression of any piece of work you ever gave him to do. Had he had the origination of the changeful types that have passed before his eyes instead of *you*, he might have retained the same vague sense of things that you have yourself; but, as it is, his memory is no more fixed about the patterns he has worked than the loom which turns out patterns mechanically. He is in for the deluge, and no soft dove comes to whisper hope in his ear. He is the slave of caprice, the plaything of fickle humours, the sport of mutable tastes and veering winds of fashion. What a long dreary jest his life has been, and how, in his sober moments, he must sigh for the blessed, irredeemably bad art of the bad days before the deluge! Yet, in this much-abused, much-misunderstood, much-enduring, unheroic, untrustworthy, misbelieving, self-seeking, wife-beating, drunken, conceited, shallow, *Daily-Telegraph*-reading, school-of-art trained man, behold the martyr of the nineteenth century. The Gothic revival proved the winding-sheet of his peace of mind, and one thinks that it had been better for his mental, his social, his moral and religious state, had the modern Gothic architect never been born! Nay, we of the Architectural Association would almost have preferred that he had been left daubing stucco-walls and chasing those curly ornaments and smiling cherubs on tomb-stones, and making those moulded Jacobean pews that we find so fascinating when we go to study Gothic architecture in some tip-top Mediæval church!

Just think of all the sad, bad, and mad architecture that has passed under the British workman's hand, say in these last thirty-five years. In 1850 he was rearing a Norman apse upon the ruins of an old chancel that had been destroyed in the interests of morality and purism. In 1855 he was building a thirteenth-century hotel with details cribbed from Salisbury Cathedral, and a bank adjoining it in the Ducal Palace style. This took him some time. In 1870 we find him titivating an old Queen Anne house in a Gothic manner; and in 1880 he was titivating an old Gothic house in the Anglo-Foreign "Early English" Queen Anne manner; and now, in this year of the architect's salvation, he is satisfactorily completing the memorial of the nineteenth century at the west end of St. Albans Abbey, under the reputed direction of our all-accomplished, soft-handed, "emancipated," and only truly British architect, Sir Edmund Becket, Q.C.

Now I want to know if we cannot do something to regenerate the art of the builder's yard and to raise the workman's position; and, if no higher motive affects you, think how it is for the interests of the modern architect and his art that you look steadily into this matter and do your best in it. I am firmly persuaded that there will be no good architectural design and no good execution until the craftsman can be brought to participate with the architect in the working out of architectural ornamentation. It is just one of those things about art which marks its divine origin and inherent dignity. You can get faultless mechanical work out of machines, and you can get good mechanical work out of human machines, but noble hand-labour is only found where the workman uses his intelligence, and where he is able to express the individuality of the individual. I would say, then, begin the work of regeneration by throwing away all your petty professionalism. Give the workman his rightful participation in your aims. Let him see into your great mind. Make him something more than the transcriber of your hesitating lines. Lift him nearer to your own level of knowledge so that he may know something of the essential qualities of the style he is working in, and may at least interpret your thought sympathetically, render in his own idiom the things you put before him, and find some way of escape for the soul within him. Thus, and thus only, will you get good architecture and good sympathetic workmanship. Thus, and thus only, will you effectually and fairly lift some of the crushing load of responsibility and labour from your own shoulders, and get the help-meets God made for you. The old architect lived long and saw good days because he was thus helped. But Pugin, Scott, Street, and Burges died young, and you know that the doctors say it is worry and not work that kills. This single-handed system of architectural design, where every detail must be supplied from the office, was too much for them. More than this. They were men of singular love of good workmanship, and nothing worried them more than to see their work carried out unsympathetically, or to find their designs carried out to a wrong scale, or their mouldings worked from the wrong side of the sectional line!

I conclude this paper with two propositions which aim at the amelioration of some of the evils I have here enlarged upon. The first is as to the selection and classification of the architectural types now in vogue. The second relates to the provision of technical education for architects and craftsmen. With regard to the first point, it is clear that no scheme of architectural design has ever been practised without a basis of workshop traditions. Shall we then—is it worth while to try and formulate our tentative styles and to systematise our distracted types, with a view to rendering



things permanent and to assist the workmen? If so, you must have a grammar and an alphabet before you can form words and sentences. Now it so happens that never since the world began has so much architectural knowledge been accumulated as is now stored up in the brains and on the shelves of the English architect. Why, then, should not these experts be set to work to formulate and render into serviceable shape the leading mouldings and forms and features of the styles in vogue? Why should not the destroyers of old English traditions do penance and make reparation for their naughty deeds, and build up new traditions? Why should we not have a well-arranged series of details of arches, capitals, bases, plinths, friezes, cornices, staircases, doors, windows, &c., for workshop use?

The second proposition is to have a technical college for the instruction of architectural design, to be for the use of architects and craftsmen. If modern architecture showed itself in as attractive form to the public as English music does, the scheme would receive the attention which we who know our pitiful state think that it deserves. One thinks that if the scheme were started under proper auspices it could not fail to receive the support of the Royal Academy, of the Institute of Architects, of the Architectural Association, and of all other public bodies who have any care for the advancement of the various arts and sciences connected with architecture. If such a college were set on foot one might feel perfectly secure about the architecture of the future, for it might be expected to bring about that harmonious cultivation of the crafts without which the practice of architecture is a delusion and a snare. Depend upon it the hope of English architecture must come from the workshop, and not from the architect's office. Cast aside, then, as unworthy and profitless, the notion of specialists within or without the profession, and this for your own sake, your art's sake, and the sake of the art of the future. Cast aside also the notion that the mere personal taste, learning, theoretical knowledge, or power of penmanship of the architect will avail anything for the real advancement of art, unless the craftsman who works out his ideas reflects his accomplishments and can sympathise with his aims.

What we want is not so much men who can design in many styles of more or less remote antiquity, or men who can sketch well, but men of aim who can lead the aimless, men who by their personal acquaintance with the handicrafts and personal participation in the production of ornamental art can build up new traditions for the workshop, restore the credit of English workmanship, and recover the lost ideal of the English architect.

The PRESIDENT said Mr. Sedding had put his subject to them in a very interesting and amusing style. Referring to the spirit of attack and slaughter that characterised the paper, the President said he had waited in hopes of hearing a remedy defined for the evils. Mr. Sedding seemed to have but a feeble opinion of the Association, and but a poor idea of its work. They had come apparently to this, according to Mr. Sedding, that the Gothic revival had been an absolute failure. The President's opinion, however, had always been that we had had architects who had created works of beauty, buildings which were sources of pleasure and subjects for study, which would always be able to hold their own, and which thoroughly fulfilled all the purposes required of them. They would all agree with Mr. Sedding in his remarks as to the relations of the architect with the workman. He believed there were architects, and Mr. Sedding one of them, who had trained their workmen to take pleasure and pride in their work—workmen one ought to stand hat in hand to, and learn all one could from.

Mr. GOTCH proposed a vote of thanks to Mr. Sedding, who, he said, had drawn such a gloomy picture in so pleasing and lively a way. Mr. Gotch said he disagreed with the President about the paper. He thought nothing could be better than to have a person in Mr. Sedding's position to come and give them cut and thrust all round, for contentment was the bane of life—he meant to say the bar to all progress—while a feeling of judicious discontent had led to all the improvements achieved. The idea of educating the workman was good, only he did not see how it could be done. It presupposed an intimate relation with the workman; but the fact was, if you gave him a moulding to work, he sent it to be run off by machinery by the mile. The modern system of procedure was at fault, and not the architect. If there were only a score of enormously rich clients who would give *carte blanche* to architects, something might be done. The system of contract, cutting down all in the shape of extras to what was barely necessary, was a serious obstacle to architecture. Mr. Gotch said he did not think specialists were the modern production so generally imagined. Men who had come down to us as architects, William of Wykeham and others, were not architects at all. He did not think they drew or designed, except perhaps some details, but set the master mason to work instead. There were not so many styles, either, in past times. Forms of mouldings, cornices, &c., had grown up gradually, and, being ready to hand, were used all over the land, but they could not fall back on that. The present condition of things must be tackled, and in the specialists he hailed Mr. Sedding's workmen, men to whom he was ready to take off his hat. We had an exaggerated idea of the old work, old furniture, &c. But it was only good work which had lived to our time.

So also a hundred years hence all this shoddy would have disappeared, our great buildings would remain, and the work of our century—the latter part, at any rate—would not be so despicable as people would have us think.

Mr. W. HILTON NASH seconded the vote of thanks. The church on the Isle of Purbeck, he said, was built of the finest stone—Purbeck stone. Time and cost for the building were not limited, and the workmen were told to put up the very best building they could. Every detail showed that they had used their utmost skill, and the church would be a lasting memorial of good work. Every man must have been ennobled by working on the building. Mr. Sedding had made out architects to be chameleons. They were red in Queen Anne style, and they became white in Gothic. However unsatisfactory, it was a condition of an age of much change, and they must make the best they could of it. Still there were many noble buildings in London. Only to mention two, there was the Reform Club, and the offices of the British and Foreign Bible Society, one of the noblest buildings London had ever produced. Mr. Sedding cited the names of Mr. Butterfield, the late Mr. Burges, and Street. These gentlemen have exercised much influence on workmen. One thing not to be lost sight of was to study no portion of a building except in its relation to the whole. Want of knowledge of sanitary matters was one thing that brought disrepute on architects, and if a specialist were called in for ever so small a matter, he would edge his way in altogether.

Mr. J. M. MACLAREN advocated some development of the arrangements in technical education and in schools of art to enable architects, artists, and workmen to work side by side. The result of this diffusion of knowledge would hinder an architect from carrying out fads of his own, as they would be seen through. The public would also get better educated in these matters.

After some remarks from Mr. H. D. APPLETON, hon. secretary, and other members, the vote was put by the President and carried by acclamation.

Mr. SEDDING, in replying, said that during twenty years he had stuck to one builder, a Cornishman, who had restored he supposed at least a score of churches for him in Devon, Bedfordshire, South Wales, London, &c., and this showed how long the question of sympathy between architect and workman had been brewing in his mind. Speaking of the advantage of having workmen who understood the work he wished them to do, he said they had all now, he was sorry to say, gone off elsewhere for higher wages. Mr. Appleton had asked whether he thought workmen would derive advantage by attending at the Architectural Association, and he should say yes.

#### MR. RUSKIN'S LECTURES.

THE fourth of the lectures on "The Pleasures of England" was given by Mr. Ruskin in the lecture theatre of the University Museum, Oxford, on Saturday afternoon, the subject being "Cœur de Lion to Elizabeth: the Pleasures of Fancy." The Slade Professor began by remarking that accidentally in the course of the preceding lecture they would remember he had given them what was, in his opinion, extremely good advice, namely, never to make a shot at anything either by word or fancy. He was the better qualified to give them that sage advice, because he was at the moment he did so making a shot himself at the name of the Venetian Doge. He thought at the time he knew it, but he found afterwards he had given them the wrong name. The proper name of the Doge he had referred to was Domenico Selos. He must ask to be allowed to read some more about him from the third chapter of a little book of his own, called "The Divine Right of St. Mark's Rest," a book which was originally intended to be read aloud, because there were many passages in it which required to be accented. The book would be placed in the school, and what he could not read to them they must look up for themselves. Mr. Ruskin quoted extensively from the volume in question, commenting by the way on the fact that the Venetians in those days were always armed; even when they went on the most pious missions they were always ready for what might turn up. Referring to the violet, the Professor reminded his audience that a long time ago he had told them that while at the home of the violet, and gathering it at Palermo, he had matched it against the violet-coloured sea, and did not know the one from the other. He here showed two water-colour drawings, one of the sea and another of the flower, to convey his meaning, remarking that the first time he saw what a Greek sea meant he saw what Homer's "violet-coloured sea" meant. He also showed a picture of three female saints in the dress of the sixth century, everything pleasing, with jewels and diamonds all round. Indeed the gorgeousness was a scene which we could not believe now, far less imagine. In "Modern Painters" he had distinguished, unnecessarily, between fancy and imagination. Dean Stanley's word "phantasy" was accurate for both, only it was somewhat of lighter affairs when we said it was fancy, and when we quitted that to call it a sense of imagination. When a boy fell foolishly in love with a girl it was said he had taken a fancy to her. If he loved her rightly—that



was to say, for her noble qualities—we ought to say he had taken an imagination to her; because then he was endowed with the new light of love which saw and told of the mind in her; but not falsely or vainly, as Wordsworth said, most unkindly and most conceitedly, of his wife:—

Were such as thou in all men's view  
An universal show,  
What would my fancy have to do,  
My feelings to bestow?

But the fact was that the poet's wife was only there simply that she might be an object from which he might draw the details of the drapery he was fancying. But a true lover's love did not bestow; it discovered what was, indeed, most precious in his mistress and wrought most deeply for his life and happiness. Day by day as he loved her better he discerned her more truly; and it was only true of her love which thus forced him to her that it could at once disenchant him and blind him; and the association of this truth in living conception of the true character was conclusively shown in the feelings which were recognised as first reaching their height in the days of chivalry. One could look at a girl until he believed her an angel, because at her best she was one; but he could not look at a cockchafer until he believed it was a girl. The Professor produced a beautiful picture of the *Virgin and Child*, with an armoured soldier standing on her right and a monk on her left. He explained this to be a copy of one of the grandest pictures in the world. After referring to several of the female mythical saints, Mr. Ruskin said it would delay them too long to dwell further on that subject; but they would find plenty in "*Fors Clavigera*." He then went on to quote from Carlyle's "*Life of Frederick the Great*," with which the lecture concluded. The subject of the next lecture will be "*Protestantism: the Pleasures of Truth*."

## THE CITY COMPANIES.

### 1. The Masons' Company.

NEARLY the whole of the records of the Worshipful Company of Masons prior to the year 1666 appear to have been destroyed when the hall of the company was burned in the Fire of London. The only documents in existence of an earlier date are the grant of arms, dated the 12th Edward IV., by which Clarencieux granted to the Craft and Fellowship of Masons a coat-of-arms, which is the same as now used by the company, and a volume of accounts, the earliest of which is dated 1620, being the accounts of the "Master and Wardens of the Company of Free Masons within the City of London." In the heading of the accounts the company is so styled until the year 1655-56, from which date to the present time the accounts are headed as the accounts of "The Master and Wardens of the Worshipful Company of Masons of the City of London." The earliest charter now in their possession is the 29th Charles II., A.D. 1677, granted on a petition by the master, wardens, and assistants of the Company of Masons in London, but there is nothing to show whether or not any earlier charter had been granted to them.

The company have the charter of the 29th Charles II. above mentioned, and a charter of the second year of James II., which commences by reciting that the master, wardens, assistants, and commonalty of the company had surrendered all their powers. The charter of Charles II. was afterwards inspected and approved in the first year of the reign of Queen Anne. By the charter of 29th Charles II., after reciting that "by an Act of the 5th Queen Elizabeth the art or occupation of a mason is reckoned as a distinct art or occupation, and that all persons exercising the said art were enabled and might be compelled to take apprentices to be instructed in the occupation," and reciting that the master, wardens, and assistants of the Company of Masons had prayed that the king would by letters patent incorporate them a body politic, to have perpetual succession, and to grant them such privileges as should seem requisite, and that the king willing and intending the support and continuance of the company, and the improvement of the art and mystery of masons, and to the end that they might be empowered to suppress and reform all abuses practised by persons who took upon them, without sufficient skill and knowledge, to work at a mason's trade, and that the art and mystery of masons within the City of London might from thenceforth be artificially and truly exercised, His Majesty ordained and granted that all and singular masons, freemen of the City of London, and all other subjects that should thereafter use the art in London or Westminster, or within seven miles' compass of the same on either side, should be one body incorporated politic by the name of "Master Wardens, Assistants, and Commonalty of the Art and Mystery of Masons of the City of London," and by the now-stating charter His Majesty did constitute and declare them to be one body corporate, so that they and their successors should have perpetual succession with power to hold lands notwithstanding the statute of mortmain, and that the company should have a common seal. The charter further ordained that there should be one master, two wardens, and twenty-four or more assistants of the company, with power to make and alter from time to time laws, ordinances, and constitutions which to them or any eight of

them should seem necessary or expedient touching or concerning the improvement or trade of the mystery of masons, and the order, rule, and good government of the company, and for defraying the public and necessary charge of the company and corporation. The charter provided that the election of master and wardens should take place annually on June 14, that the assistants should be chosen for life unless removed for evil government or misbehaviour or other lawful or reasonable cause; and the charter granted power to the master, wardens, assistants, and commonalty of the company in lawful manner at all convenient times at any place within seven miles of the City of London or Westminster, where any stones to be used in the art or trade of masonry should be brought or laid, to search and see whether the same be of proper length and measure, and whether the same be well and sufficiently wrought, and if any should be found and adjudged to be illwrought and not amended at the charges of the owner before the same should be put to sell, or that any of them which should be so faulty that they cannot be made good, then they should be disposed of according to law, and that the company should have power to depute any fit persons to make and execute such views and searches. The charter further ordained that no person should exercise the art or mystery of a mason, unless he served seven years' apprenticeship to a freeman of the company, or to some other person lawfully exercising the art. The charter provided that nothing in it should be considered to extend to the prejudice, obstruction, or hindrance of the erecting, building, and finishing of the cathedral church of St. Paul in the City of London, or any other church in the same city, which was formerly burnt down by the late dreadful fire which happened in London. The charter further provided that the master, wardens, and assistants of the company, and all other persons admitted into or employed by the company, should before execution of their offices take the oaths of allegiance and supremacy. The charter of February 9 in the second year of King James, after reciting that the master, wardens and commonalty of the Company of Masons had surrendered all their powers, franchise, privileges, and authorities of or concerning the electing, nominating, constituting, being or appointing of any persons into the several offices of master, wardens, assistants, and clerk, which surrender His Majesty had accepted: The charter constituted, declared, and granted that all and singular masons freemen of our said City of London, and all other subjects that then did or thereafter should use the same trade within the cities of London and Westminster, or seven miles' compass of the same, and all other persons that then were or should thereafter be free of the company, should be one body incorporate politic, by the name of master, wardens, or commonalty of the art or mystery of the masons of the City of London, and the charter ordained and constituted them one body corporate and politic accordingly. The charter granted to the same company power to hold any manor, lands, tenements, liberties, jurisdictions, franchise, rents, reversions, privileges, and other hereditaments in fee and perpetuity or for years, the statute of mortmain or any other statute notwithstanding, and the same lands to sell again, lease, and grant, and to sue and be sued as a corporate body, with similar directions as to the officers of the company to those contained in the charter granted by Charles II.

By the charter, the company are authorised at any place within seven miles of the City of London or Westminster, where any stones to be used in the art or trade of masonry should be brought or laid, to search and see whether the same be of proper length and measure, and whether the same be well and sufficiently wrought, and if any shall be found and adjudged to be ill-wrought, and not amended at the charges of the owner before the same be put to sell, and that any of them that are so faulty that they cannot be amended and made good in size, thickness, and goodness, the same should be then disposed of according to law, and the company was to be at liberty to appoint deputies or agents to make such searches.

The by-laws provide the mode of carrying out this search, authorise the appointment of deputies for the purpose, direct that no person of the company shall buy any stone to use or to sell again until the same has been viewed, and that the company shall have for their pains in viewing and searching 4d. per 100 of Purbeck stone, and 4d. per ton of other stone. It also provides that if His Majesty or his successors should have occasion for the masons to erect, build, repair, or finish any structure, fort, tower, castle, or fortification, it should be lawful for the master, wardens, and assistants of the company to provide so many masons, members of the company, as should be from time to time ordered by the master mason of England for the time being.

It appears by the accounts of the company that this privilege of searching stone was exercised for several years. No entry appears in the accounts of the company of any receipts from this source in this century, and the right has not been exercised within the memory of any living member of the company.

The present constitution of the governing body (three having recently died, and no opportunity of filling up their office having yet occurred) of the company is a master, a warden, a renter warden, and seven assistants. This constitution is in accordance with the charter, except that the charter prescribes that there



should be twenty-four assistants. The number has fluctuated from time to time, and, as the charter prescribes that eight members of the Court should be a quorum, the number of assistants has been allowed to diminish.

The only qualification for membership of the governing body of the company is that the person elected should be a freeman and liveryman of the company.

The master, wardens, and Court of assistants of the company have the free, exclusive, and uncontrolled management of the affairs of the company. Each member of the Court of assistants on his election to the Court pays a fine of 5*l.* 7*s.* 6*d.* Each member of the Court of assistants when elected renter warden pays a fine of 4*l.* 7*s.* 6*d.* The upper warden when elected pays a fine of 4*l.* 7*s.* 6*d.*, and the master when elected pays a fine of 4*l.* 7*s.* 6*d.* There is no salary paid to the members of the governing body, but each member receives a fee of 2*l.* 2*s.* at each Court at which he attends.

The master is elected annually, and serves for one year. The upper warden and renter warden are elected annually, and serve one year. They are always members of the Court of assistants. The Court of assistants under the charter are nominated to the office during their natural lives, unless they or any of them shall misbehave themselves in their said offices, or for some other lawful or reasonable cause shall be removed. By a resolution of the Court of assistants passed on the 22nd day of October, 1873, and which has been signed by every person then a member of the Court, and every one since elected, it was resolved that any member of the Court becoming bankrupt, or making any arrangement with his creditors to procure a release from his liabilities, or paying less than 20*s.* in the pound, should cease to be a member of the Court. There are at present members of the company formerly members of the Court of assistants who have resigned their office of assistant, but no member has been removed against his will within the memory of any one now in the company.

The by-laws of the company were made by the master, wardens, and assistants of the company, were approved of by the Lord Mayor and Court of Aldermen and the City of London, and were ratified and approved by the Law Courts in 1678. The by-laws prescribe regulations for admission and register of apprentices, regulations for the search of stone used, brought, or laid in any place within seven miles of the City of London or Westminster, and certain fees for such search, namely, 4*d.* for every 100 of Purbeck stone, and 4*d.* a ton for every other stone. They prescribe the dimensions of paving stone, hard stone, ashler's Purbeck stone, and steps.

It was ordained that all persons using the art or mystery of a mason within the cities of London and Westminster and seven miles compass thereof, then, or thereafter to be made free of and admitted into the company, shall contribute his or their equal sum or proportion of money towards paying or defraying the charges and expenses to be disbursed about the common affairs of the company. The freemen of the company were prohibited from employing any foreigner or journeyman coming out of the country either alien or English not being free of the company unless he be first presented to the master and wardens of the company, and bring a certificate with him of his lawful service, behaviour, and former place of abode.

The members of the company consist of freemen and liverymen: women are not admitted to membership of the company. The qualification for membership of the company is that the applicant shall be a male of full age and a subject of Her Majesty.

The freedom of the company may be obtained:—1. By patrimony, if, at the time of the applicant's birth, his father was free of the company. 2. By servitude, serving an apprenticeship of seven years to a member of the company. 3. By redemption. The fees payable in respect of the admission are 5*l.* 5*s.* by patrimony, 5*l.* 5*s.* by servitude, 7*l.* 7*s.* by redemption.

The charter of 29 Charles II. prescribes that no person shall exercise the art or mystery of a mason within the cities of London or Westminster, or within a compass of seven miles thereof except the freemen of this company. There is no process for compelling such persons to procure admission. The freedom of the City of London is not in any way a condition precedent or subsequent to membership. There are members who are not free of the City of London. A considerable proportion of the members of the company are connected with the building trade, being either architects, engineers, surveyors, builders, masons, or stone merchants. The numbers of persons following these occupations who are now members of the company are twenty-two.

Freemen are not liable to disfranchisement.

The livery of the company is unlimited in number. The qualifications for election to the livery are that the applicant should be free of the company and have taken up his freedom. The electors to the livery are the master wardens and Court of assistants. The fees payable on election to the livery are 15*l.* No liveryman has been removed from the livery after his election thereto within the memory of anyone connected with the company.

The present number of freemen of the company is forty-one. All the freemen are liverymen of the company. There are no other members. The number of admissions to the freedom of the company and calls to the livery which have taken place during the

year 1871 was two, both by redemption. In the year 1872, there were two by redemption, and one by patrimony. In the year 1873, one by redemption. In the year 1874, one by redemption. In the year 1875, two by redemption. In the year 1876, one by redemption. In the year 1877, one by redemption. In the year 1878, none. In the year 1879, one by redemption. In the year 1880, two by redemption. Each person admitted to the freedom of the company during the last ten years has been called to the livery of the company forthwith.

No apprentices have been bound under the auspices of the company during the last ten years.

There are no pecuniary advantages incident to the position of a member of the company as freeman, liveryman, or member of the governing body, except as stated in next paragraph. A freeman of this company is entitled to become a freeman of the City of London. There are no other advantages.

The sum paid on an average annually for the last ten years by the company to the master of the company has been a fee of two guineas for his attendance at each Court, averaging 12*l.* 12*s.* per annum. To each warden a fee of two guineas for attending each Court, averaging 12*l.* 12*s.* per annum. To each renter warden a fee of 2*l.* 2*s.* for attending each Court, averaging 12*l.* 12*s.* per annum. There are at this date only ten members of the Court of assistants, including master and wardens, but there are usually twelve. Each member attending the Court punctually is entitled to a fee of 2*l.* 2*s.* The average amount paid to the members of the Court annually during the last ten years, including the amount paid to the master and wardens, has been 115*l.* The amount paid annually in pensions to persons, members of the company, during the last ten years has averaged the sum of 132*l.* 3*s.* 6*d.*

There are no other payments to any member of the company. The circumstances which in practice are held to constitute a claim to a pension or donation from the funds of the company are that the applicant should himself have been a freeman of the company, or if a woman, that her husband or father should have been free. The number of pensioners at present receiving annually pensions from the company are nine. The pensions paid are one of 25*l.*, one of 20*l.*, two of 15*l.*, and five of 10*l.* All but one of the pensioners are connected with the trade of masons or the architect's profession.

The average standing of a member of the company when he becomes a member of the governing body is from eight to ten years. Any member elected to the Court of assistants continues a member for the remainder of his life. The two last senior members of the Court who have died in office had been members of the company for over fifty years and over sixty years respectively. The company does not carry on any trade or manufacture.

#### GLASGOW ARCHITECTURAL ASSOCIATION.

THE annual monthly meeting was held in the rooms on Tuesday night, the Vice-President in the chair, when Mr. James Brough, decorator, read a paper on "Ornamental Forms in Nature." Confining the portion of nature studied to the vegetable kingdom, the essayist reviewed in order the Egyptian and Greek styles of ornament to prove how each, though in widely different ways, took nature as their model, but only in principles carefully deduced, and never by attempted mere copying—an art simply imitative requiring little more than patience for its accomplishment. The laws regulating true conventionalism, and also those—more specially seen in plant life—which apply to the form and direction of curves, were considered; in all cases abstract form rather than colour being studied. The paper was illustrated by a large number of botanical diagrams, studies of plants and decorative applications of the same, all the work of the essayist. A portfolio of Owen Jones's designs for wall decorations, and also one of present-day manufacture were exhibited to show the increased freedom with which designers now utilise natural forms. A vote of thanks to Mr. Brough terminated the meeting.

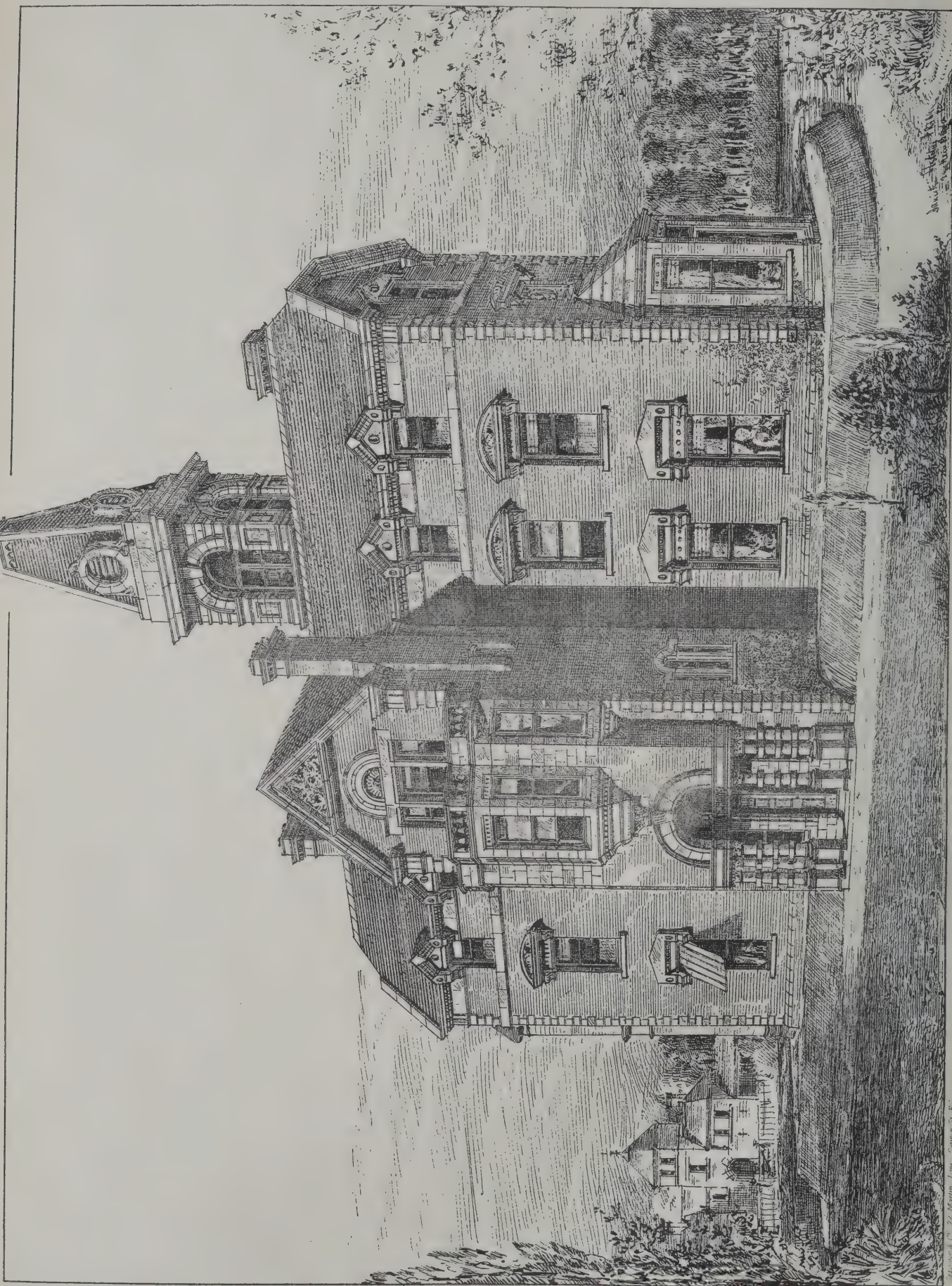
#### THE GWALIOR GATEWAY.

THE final consignment of the carved stonework of the gateway presented to the South Kensington Museum by His Highness the Maharajah Scindiah has recently arrived in London; but owing to the great size and weight of the pieces of masonry it has been found impossible to assign a suitable place to it in any part of the present buildings. The Indian collections being located in the galleries of the Royal Horticultural Gardens until the completion of the western wing of the South Kensington Museum, no site can be found on which the gateway can be incorporated with the permanent buildings. As it would be a regrettable circumstance if, for this reason, this magnificent gift could not be exhibited to the public for some years, we are glad to learn that it has been proposed that the authorities of the museum should be requested to allow this imposing example of Indian art workmanship to be lent to the Commissioners for the great Indian and Colonial Exhibition which is to be held in London in 1886, in the grounds of which there would be space to erect it. The place of honour would be assigned to it in the Indian Department, and the Maharajah's gift would attract a wide notice, and doubtless be duly appreciated.









LADYWELL, ORPINGTON, KENT.  
BANISTER FLETCHER, FRIBA. ARCHT.









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FINSBURY CHAMBERS, FINS

J. W. BROOKER, ARCHT



















This is a detailed black and white woodcut illustration of a large, multi-story Tudor-style house. The house features half-timbering, multiple chimneys, and a prominent corner bay window. A small tree is in the foreground, and a large, cloudy sky is in the background. The illustration is oriented vertically on the page.















"INK PHOTO" SPRAGUE & CO LONDON

SKETCH OF BLOCK OF NEW HOUSES & CHAMBERS NOW IN COURSE

ROBERT W. EDIS



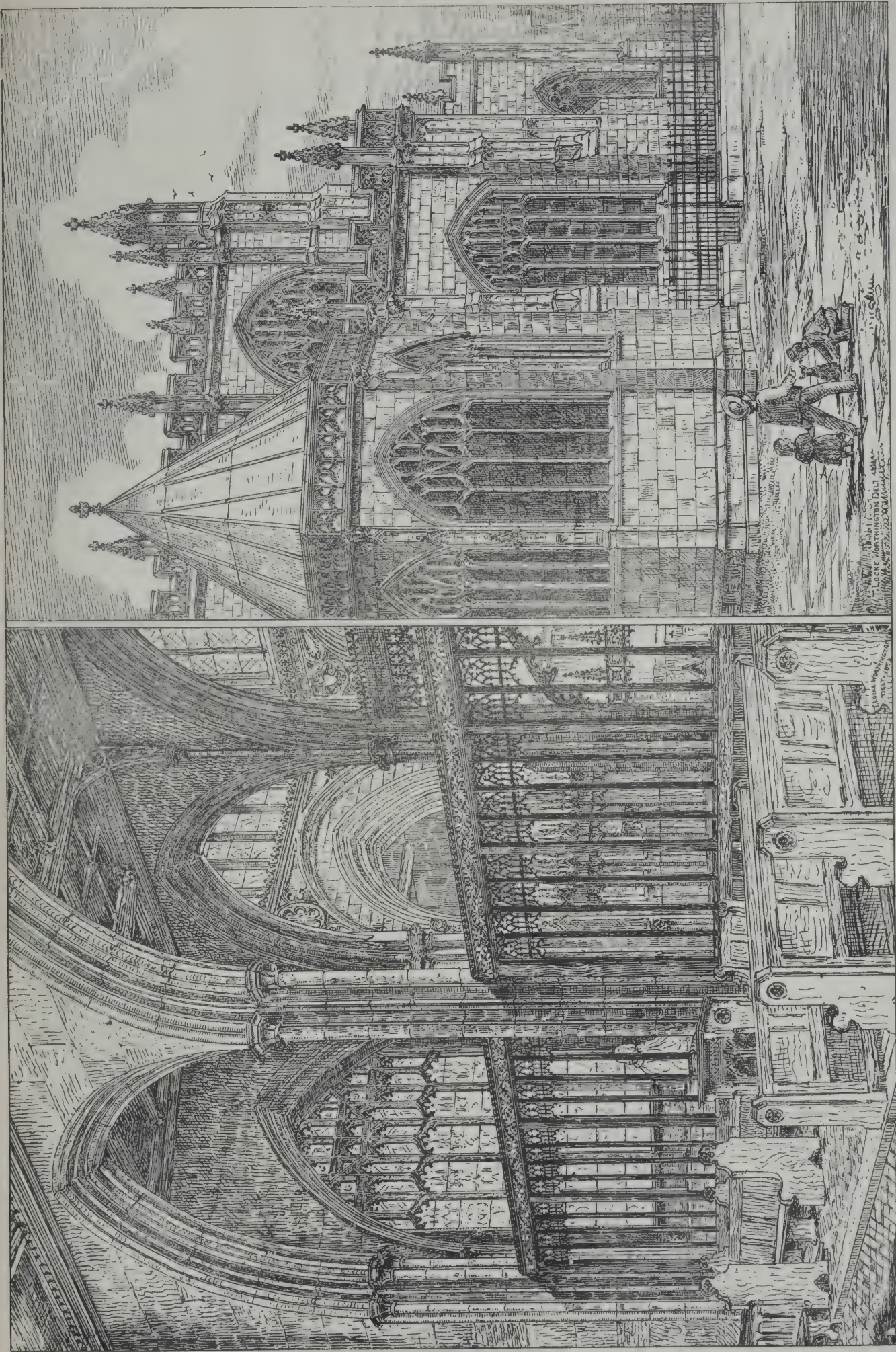


ERECTION AT THE CORNER OF BROOK STREET & DAVIES STREET.  
P.A. ARCHITECT.









RETRO CHOIR FROM DERBY CHAPEL.

SKETCHES OF MANCHESTER CATHEDRAL.

DRAWN BY T. LOCKE WORTHINGTON.

CHAPTER HOUSE, SOUTH AISLE OF CHOIR, &c.







## ILLUSTRATIONS.

LEWINS, KENT.

BEGUN a few years ago and recently completed, this mansion-house stands on the slope of Crockham Hill, near the little village of the same name, and commands most extensive views southwards over Kent and Sussex, the site being almost unequalled in this respect. It is built of red brick, relieved here and there with weather-tiling and half-timber work. The window-mullions and dressings on the ground-floor are of Howley Park, a Yorkshire stone of a soft greenish-grey colour, and the roofs are covered with dark brown local tiles.

The stables and home-farm are about a couple of hundred yards to the north of the house, arranged round two courtyards, and form a picturesque group of buildings in harmony with the style of the house.

The contractor for the whole of the works was Mr. DURTNELL, of Brasted, Kent; and the architect, Mr. J. M. BRYDON, of 5 Cambridge Place, Regent's Park.

LADYWELL, ORPINGTON.

WE give a view of a residence called Ladywell, which has been erected at Orpington, in Kent. As the land was of a flat character, the architect raised the building on a terrace, and placed the steps between the outer and inner halls. The rooms on ground floor are dining, drawing, and morning rooms, library and billiard-room (30 feet long). From the water tower extensive views of the charming country are obtained. In the grounds, which are about  $7\frac{1}{2}$  acres in extent, are the stabling, greenhouses, and forcing-houses. A lodge is placed at the entrance from the road. The architect is Mr. BANISTER FLETCHER.

FINSBURY CHAMBERS, FINSBURY PAVEMENT, LONDON, E.C.

THESE premises are now in course of erection at the corner of Cross Street by the Finsbury Estates Company, Limited. The substructure of the former building on this site consisted of massive walls and arches, forming a portion of the vaults built over a large area of Finsbury Fields by Messrs. WHITBREAD & Co. about the year 1715. The basement of the new premises will have an almost uninterrupted area of 12,700 feet superficial, and will again be occupied by Messrs. A. PROBYN & Co., ale and beer merchants, who will also have some portion of the ground floor for offices, bottling stores, stabling, &c. On the ground floor, and facing towards Finsbury Pavement, there will be three shops, constructed fireproof, and the corner shop having a frontage to Cross Street, with show-rooms, &c. In Finsbury Pavement also will be the entrance to the suites of offices which it is proposed to form on the first, second, and third floors. This entrance, through an ornamental stone and granite doorway, leads up to the wide stone staircase to first floor, which on this floor is surrounded by an open arcading. The staircase to second and third floors will be of stone, and 7 feet in width, and lighted by a large lantern light. There is a demand for offices in this locality. It is believed that these suites will readily let at the moderate rents at which they will be offered. The fronts of the building to be faced with best white Suffolk bricks, relieved with Portland and Corsehill stone dressings and granite pilasters.

The contractor is Mr. W. DOWNS, Hampton Street, Walworth, S.E., whose tender, 14,967*l.*, was accepted. The works are being carried out from the designs and under the supervision of Mr. J. W. BROOKER, Architect, 13 Railway Approach, London Bridge, S.C.

ILLUSTRATIONS OF MANCHESTER CATHEDRAL.

THE two views on this plate are reproductions of drawings by Mr. T. LOCKE WORTHINGTON, and correspond with those appearing in his book on Manchester Cathedral, lately published. The following extracts describe the subjects:—

The chantry of St. John the Baptist, commonly known as the Derby Chapel, was founded by Sir James Stanley, fourth Warden and Bishop of Ely, and built by John Stanley between 1513 and 1515. We are told in the MS. History of the Wardens that "at Manchester he builded a most sumptuous chapell on the north side of the church, being 28 yards long and 9 yards broad, and a square chapell on the north side of that again he built." It extends the whole length of the choir, being divided from the same by a series of five arches, which were built by Sir John Stanley, the

founder's son, who removed the windows erected by Warden Huntingdon in the north aisle. It is interesting to note that the mouldings of this arcade are of later character than those of the choir. The capitals of the piers are semi-octagonal, and not round, as in the earlier work. The entrance to the chapel is from the westernmost bay, through the beautiful screen-work which fills each archway. These screens, constructed of native oak, between 1506 and 1516, though not so well executed as that on the north side of the library, are elaborately ornamented and elegantly constructed. The tracery contains three designs, many panels having, however, been very poorly restored from time to time.

The entrance to the chapter-house is from the middle bay of the south choir aisle. The octagonal plan of this structure is generally attributed to Bishop Stanley, and Huntingdon is supposed to have previously erected a rectangular vestry. Facts, however, appear to bear out the statement that Huntingdon erected a detached octagonal chapter-house on the site of the existing structure. It was in 1846 that the exterior was designed by Mr. Holden, the work being executed with Horwich stone from the neighbourhood of Bolton. The interior was restored in 1866-68, when an oak vaulted roof was constructed instead of the old flat roof ceiled with plaster. It is lighted by four windows of four lights each, somewhat similar to those in the clerestory of choir. The walls are panelled in oak up to the sills of the windows. Each panel contains rich tracery, and the whole is finished by a battlemented cornice.

## ROSSETTI'S "VENUS VERTICORDIA."

THE oil paintings, water-colour drawings, and engravings which belonged to the late Mr. John Mitchell, of Manchester, were offered for sale on Tuesday by Messrs. Capes, Dunn & Pilcher. The collection included the *Venus Verticordia* of Dante Gabriel Rossetti. The disposal of this great work has excited a good deal of interest, and a proposal has been made that it should be secured for the permanent Art Gallery of Manchester. The point of the sale was of course the putting up of this picture. It was described in the catalogue as a "Half-length nude figure of a female, with long auburn hair, holding an apple on which a butterfly has alighted in her left hand, and a dart to which clings another butterfly in her right, surrounded by roses and honeysuckle." The auctioneer quoted a passage from Mr. Ruskin on the importance of Mr. Rossetti's work, and echoed the hope that the picture would remain in Manchester. He was instructed, he said, to put up the picture at 1,000*l.* After five minutes of waiting there was no offer made of any sort, and the picture was withdrawn. A small water-colour drawing by Mr. Rossetti, *Brimful*, was sold for 105*l.*

## THE EXPLORATIONS AT OLYMPIA.

THE first lecture of an extra course on "The Arts of Greece" was delivered by Professor Baldwin Brown, in the Class of Fine Art, University of Edinburgh, on Monday. Commencing with an account of the German explorations at Olympia, the Professor said the results of that undertaking had been, in the first place, the discovery of works of sculpture belonging to almost every period in the annals of Hellenic art. The very earliest times were represented by several thousand small bronzes, which showed that Olympia was a religious festival long before the Olympic games were founded. Of later periods were found the great pediment groups of the Temple of Zeus, while, to crown all, in the *Hermes* of Praxiteles we possessed the only certain work which had been handed down to us of the most famous of all the Greek sculptors except Pheidias. But it was in architecture that the gain was greatest. The discoveries at Olympia had done much to elucidate what was previously obscure; a new light had been thrown on the origin and form of well known types of buildings, while structures which we should have rejected as not being Hellenic at all had almost revolutionised our former notions of Greek architecture. The mention of Olympia, the Professor went on to remark, called up an institution that had not only importance for the historian of art, but was in a sense the spiritual centre, the very heart of Hellas. Standing in the sacred grove of the Temple of Zeus, we should have had around us monuments, not only of the Greek love of beauty, but of Greek religion, Greek patriotism, Greek social and family life; the strength and the weakness of the people could be read in their buildings, the works of art, the inscriptions, and the aspect of the crowd that thronged the place on festive occasions. A somewhat detailed account was then given, with the help of maps, diagrams, and drawings, of the topography of Olympia, of the history of its great celebration, and of the mode of carrying out the various games which occupied the successive days of the festival; and, in concluding, the Professor remarked that it was quite characteristic of Greece that the most famous and longest-lived of all her institutions was a festival, and that the leading feature of this was a



series of prolonged and arduous contests for the sake only of victory and fame. The Greek love of such contests sprang entirely from Greek idealism, from that ever fresh and buoyant impulse to rise from out the commonplace surroundings of actual life into a region where thought would move in perfect freedom. Some might call this region an unreal one; but to the Greeks this was the real thing in life, because it was their own creation—a thing they had made. So they strove and interested themselves in the strife of others for a crown of wild olive or parsley, and for fame; and this fame was not a sordid object—it was the sense that they themselves had fulfilled the highest function of their being, and that others realised and noted what they had done. The games became in a true sense their most serious achievement, and of all that the Greeks had left us, perhaps nothing was of such value as their constant testimony to the worth of ideals, their determination not to be bound down by circumstances, but to build for themselves in freedom a spiritual house of life. This, which was the keynote of Plato's greatest thought, was also, in another form, the spirit which ruled in those national festivals.

## BIRMINGHAM ARCHITECTURAL ASSOCIATION.

THE annual conversazione of the Birmingham Association was held at Queen's College to inaugurate the opening of the eleventh session. There was a large loan collection of drawings from London, in addition to those contributed by members, together with specimens of tapestry, wrought-iron, and other materials of architectural interest. The secretary stated that the annual report and balance-sheet would be read at the first ordinary meeting. The president, Mr. F. B. Osborn, opened the proceedings with an inaugural address, in which he entered minutely into the work of the various classes and the general progress of the Association. He urged upon the younger members the necessity of connecting themselves with a society where so many facilities were afforded for the advancement of their profession. A vote of thanks, proposed by Mr. J. J. Bateman (ex-president), and seconded by the vice-president, Mr. W. H. Kendrick, was unanimously accorded to the president for his able and interesting address. After a lengthy musical programme, the proceedings terminated. Among the gentlemen present, in addition to the officers mentioned below, were Messrs. J. Cotton, W. Doubleday, R. B. Morgan, Franklin Cross, H. Lloyd, O. Askell, A. E. Radclyffe, H. Clue, T. Tonks, &c. The following is the list of officers for the ensuing session:—Mr. F. B. Osborn, F.R.I.B.A., president; Mr. W. H. Kendrick, chairman; Messrs. O. Essex, A.R.I.B.A., F. H. Hughes, A.R.I.B.A., C. E. Bateman, T. W. F. Newton, F. E. F. Bailey, A.R.I.B.A., H. H. McConnal, A.R.I.B.A., and E. Wood, members of committee; Mr. A. Reading, A.R.I.B.A., hon. treasurer; Mr. A. Hale, hon. librarian; Mr. Victor Scruton, hon. secretary.

## THE WALLACE STATUE FOR ABERDEEN.

THE competition of sculptors for the designing of the Wallace statue proposed to be erected in Aberdeen has resulted in the selection of the model submitted by Mr. W. Grant Stevenson, Edinburgh. The monument in question was projected by the late Mr. John Steill, Grange Road, Edinburgh, who bequeathed a handsome sum for the carrying out of what would seem to have been a long-cherished scheme. Competitive designs having been called for, twenty-five sculptors entered the lists; and from their models, forwarded to Aberdeen about three months ago, the trustees, aided by the artistic advice of Sir Noel Paton, R.S.A., and Dr. Rowand Anderson, architect, selected three, which their respective authors were requested to revise with reference to costume and other details. The sculptors thus placed on a short list were, besides Mr. Stevenson, Mr. J. Whitehead and Mr. Warrington Wood. The revised designs having been inspected by the trustees and their artistic assessors, the final decision was given in favour of Mr. Stevenson's. Under the terms of the competition, Messrs. Whitehead and Wood are each entitled to a premium of fifty guineas. In the successful model—which, like the others submitted in the competition, is about 4 feet high—Wallace is represented as standing on a rock, the figure being firmly poised on the right leg, and the left foot, well advanced, planted on a raised projection. The head is bared, the hair being blown back as if by a fresh breeze; and the animated expression of the features corresponds with the action of the outstretched left arm in emphasising the declaration which the champion is supposed to be making to the English ambassadors, that his purpose is not to treat, but to fight for Scotland's freedom. The right hand holds the huge sword, whose blade, forming a diagonal line across the body, seems to bar the enemy's advance. In the absence of any authentic portrait, the head is partly ideal, partly formed on descriptions of the hero's appearance. The costume, which has been studied from carved work of the period, consists of chain armour under a tunic, which is girt round the middle by the combined waist and sword-belt. A cloak falling from the shoulders,

and partly covering the left arm, affords opportunities for effective disposition of light and shade. The statue is to be cast in bronze on the colossal scale of 16 feet, and will be the largest work of the kind in Scotland. A site has been selected for it on an artificial mound in the Duthie Park, Aberdeen, where it will be placed on a pedestal of rough granite. The price to be paid to the sculptor is, we understand, 3,000*l*.

## ODDINGTON CHURCH.

THIS church was reopened on the 28th ult. On the following Saturday it was visited by the members of the Oxford Architectural and Historical Society, who chose it as the first of their term's excursions. Mr. Bruton, the architect, from whose designs the church has been restored, met the members and delivered a lecture, from which the following description has been abstracted.

This is a most interesting example of a very simple church, built very early in the fourteenth century, and consists of nave, chancel, and north aisle, to which has now been added a small vestry on the north side. This is separated from the chancel by an arch, under which is space for an organ. This description, however, may more properly be said to belong to the restored church, as, previously to the work being undertaken, there existed between the chancel and tower a large bare room of good height, with a flat ceiling, from which the tower opened at the south side of the west end, and, possibly to in some degree mask the want of symmetry this arrangement involved, the arch was neatly boarded up, and the whole carefully whitewashed, boards and all.

At the east end a similar want of symmetry existed, the chancel arch being similarly out of the centre. It had an elliptical arch constructed of framing and lath and plaster, of course jointed to represent stone; the only internal evidence of a north aisle having ever existed was to be seen on the north side of the chancel arch, where there was a semi-arch of stone springing from the north wall up to, and apparently intended to support, the plaster chancel arch. The external walls undoubtedly led to the suggestion that the arcade of the north aisle had been removed. Admitting this hypothesis, the symmetry of the church becomes apparent. Investigation proved that the north wall had been raised, and a common queen-post roof made to span the entire width. This wall being of less substance than that on the south, had in several places given way, and modern buttresses had been built against it to withstand the thrust. The roof had become very unsound and the ceiling dangerous, and many of the timbers decayed. Above the flat ceiling, and under the roof, was discovered the original water tabling, now to be seen on the tower above the restored roof. The lines of this water tabling conclusively proved the original existence of a north aisle, the centre line of the original roof being central with the tower. When the roof was removed there appeared above the central line at the east end remains of an earlier chancel arch, but further investigation proved that this was not original, for, on knocking away the plastering of the sham arch, there was found on the north side one of the original shafts of the north arcade; it was octagonal in shape, but not a perfect octagon, and on the south side was a respond or half-column to receive the thrust of the arch. That these, however, were not *in situ* was evident, and the arch was much too high for any roof that would come within the lines of the water tabling on the tower, and the fact that the shaft on the north side did not belong to its position was proved by its being an entire column instead of the usual half column fitted for such a position.

In removing the upper part of the north wall to bring it to the level necessary for the roof, it was hoped that further remains would be discovered. None of the stones, however, which were found could be said to belong to it; but several of an ornamental character clearly belonged to a twelfth-century arch, which was probably removed when the before-mentioned one was built. This, of course, was done to get a wider opening between the nave and chancel. Mature consideration convinced one that this arch and the shafts were part of the north arcade, and, in fact, the before-mentioned shaft and respond have been replaced at the west end of the restored arcade, where, it is believed, they originally belonged. The stones of the arch and of the shaft have been re-used without any disturbance of the original surface, and several of the stones bear upon their face painted scroll-work belonging to the period; there is similar work to be seen at Charlton-on-Otmoor.

The bases and capitals were too much mutilated to be re-used, the mouldings having been cut away to receive the framing of the plaster sham arch. These mouldings have been carefully reproduced in all the capitals and bases of the arcade; the new arches are also fac-similes of the discovered one. The windows of the south side of the nave and of the north aisle had been much mutilated, with the exception of the western window of the north aisle, which is original; the mullions and heads had been removed and the jambs cut away, and the space covered with a single arch. Those on the south side were nearly round-headed, and were probably rude imitations of those in the neighbouring church of Islip, built by Dr. South, who was rector of that parish in 1680.



All the inside mouldings of the arches of the windows had been cut away. The present windows are of two lights, with dripstones, having mask terminations. The north doorway has also been reopened and similarly finished. The new roof has tie-beams, with moulded king-posts, with framed rafters belonging to the period of Edward II., which has been adopted, although belonging to a slightly later period than the walls, because the walls are slightly out of upright, and this kind of roof has no thrust.

The original pulpit, upon which the date 1617 can be seen, has been re-used, and new oak benches, *fac-similes* of some fifteenth-century originals, replace the high close pews of the last century.

When the chancel roof was removed there was found built into the walls the corbel and basin of the piscina, which has been replaced; and in pulling the opening for the new vestry arch there was found a two-light window of the period of Henry VII., and on the south side, nearly opposite, a very rude copy of the same. This, however, being too much mutilated, has been removed, and the better one, found in the north wall, substituted. The roof of the chancel is of a similar character to that on the nave, replacing a brackotted plaster ceiling, elliptical in section.

The choir seats and vestry screen harmonising with those in the nave, but somewhat more rich in character, have also been executed in oak. New oak chancel rails have also been added, with iron standards.

The remarkable fifteenth-century brass in the chancel—a skeleton in a shroud, with worms crawling in and out, to Radulph Hamsterley—has been carefully preserved and replaced. The masonry of south door and porch has been reset. Oak doors, with suitable iron-work, to north and south entrances have been provided, and the porch re-roofed. Handsome stone crosses have been also placed on the gables of chancel, nave, and porch.

The work has been executed by Messrs. Silver, Sons & Filewood, from the designs and under the direction of Mr. Edward G. Bruton, architect, of Oxford, and surveyor for the diocese.

### WESTMINSTER HALL.

THE First Commissioner of Works has agreed that the Select Committee which has been nominated to "examine and report on the proposed plans for the restoration of the exterior of Westminster Hall," should be allowed to inquire into the whole subject, and not be confined to the proposals of Mr. Pearson. Mr. Mitchell Henry, M.P., says:—The matter is of great moment, for if a mistake is made now it can never be repaired, and the outside public know little of the facts in consequence of a hoarding having been kept round the locality, which only members of the Legislature and favoured persons have been able to penetrate.

Mr. Henry also writes:—The demolition of the old Courts of Law has disclosed the existence of a series of ancient Norman buttresses, built in all probability by Richard II., about the year 1394, for the purpose of strengthening the external wall of Westminster Hall, when he made great alterations in the building and erected its existing magnificent timber roof. As is well known, the hall itself is some 300 years older, having been built by William Rufus in 1097, and it has associations with the great events of our history that render it only one degree less sacred than Westminster Abbey itself.

The Norman buttresses of Richard II. are by no means beautiful, but they must be preserved not only on account of their antiquarian interest, but for structural reasons involving the stability of the building. Mr. Pearson proposes to utilise them in order to form an underground cloister for the carriages and horses of members of Parliament, and to erect over this a two-storeyed building in imitation of what is supposed to have existed before. On inquiry we were informed that the upper floor of this building could be used as a storehouse for stationery and Parliamentary papers. Surely these proposals must insure their own condemnation. One trembles to think of stores of inflammable materials in near proximity to the timber roof of Westminster Hall; while the proposed elongated cabmen's shelter, 12 feet high and 19 feet broad, with no exit at the other end, and with all the *agrément*s incidental to the animal life of the men and horses, are little in accordance with the great traditions of the place.

Far from putting fresh buildings in this situation, I venture to say that as the removal of the Law Courts has given us this clear space, it should be kept clear, and only a screen or stone facing be permitted to interfere between Westminster Hall and the Abbey, now for the first time fully displayed in all its beauty. The interior of Westminster Hall itself is dark, cold, and so deficient in light that the matchless timber roof can with difficulty be discerned; but if the spaces left in the walls by the doors of the old Law Courts, and the windows over them, were replaced by suitable Gothic fourteenth-century windows, filled with stained glass, the splendour of the hall and its wonderful roof could be worthily seen. Of course such windows would be placed in regular sequence, and could be opened in the wall when required.

I say nothing as to the future use of the hall or whether it would make an appropriate Valhalla of the nation to the relief of the abbey, now so painfully crowded as to look like a sculptor's

studio, because this is a very serious and complicated question upon which opinions will widely differ. Few, however, will object to the better lighting of the hall, or to its preservation from ignoble associations and the risks of fire, and I think there are not many persons who will desire that the proposed plans should be rushed through Parliament without such a complete and searching inquiry as is not now contemplated, or at any rate was not contemplated when the motion came on.

In the meantime, the external buttresses should be carefully protected by timber from the effects of the weather. Parliament granted a large sum of money for this purpose at the close of last session on the plea of urgency; but how little those who raised this cry believe in it, may be learned from the fact that since then nothing whatever has been done to the buttresses. In short, the questions at issue are national questions, and although we all have the greatest confidence in the present energetic First Commissioner, it is neither just nor expedient that the Board of Works and one architect should treat this matter as though it was an everyday affair, not allowing of differences of opinion.

### SANITARY INSTITUTE OF GREAT BRITAIN.

AT an examination, held November 6 and 7, twenty-seven candidates presented themselves, eight as local surveyors, and nineteen as inspectors of nuisances. The Institute's certificate of competency to discharge the duties of local surveyors was awarded to Messrs. B. R. Phillipson, J. E. Worth, and Gilbert Thomson; and to discharge the duties of inspectors of nuisances to Messrs. W. Daley, J. Brooks, J. Houghton, J. Neal, T. Wheat, W. Fraser, J. Loach, J. Marshall, F. S. Winsor, J. T. Simpson, A. H. Rollinson, and Ben Potter.

The following are the examination papers:—

#### Local Surveyors.

1. On what subjects, and under what conditions and restrictions, may by-laws be made under the Public Health Act, 1875:—  
(a) By urban sanitary authorities? (b) By rural sanitary authorities?

2. What are the powers and obligations of urban and rural sanitary authorities with respect to water supply within the area of their several districts?

3. What volume of sewage would you provide for at the outfall sewer from a town of 10,000 population, the drainage area being 550 acres, taking 25 gallons per head of water supply and  $\frac{1}{2}$ -inch rainfall in 24 hours?

4. Give a specification and make a sketch of a water-tight sewer. Describe and give a sketch of the form of manhole which you consider best adapted for ordinary town sewers; and state the rule which you adopt for determining the amount of ventilation to be afforded in the main street sewer.

5. In what way does the size and shape of a sewer affect the velocity of the sewage flowing through it? If a 12-inch pipe sewer, with an inclination of 1 in 175 gives a velocity of  $3\frac{1}{2}$  feet per second, what velocity would it give if laid at an inclination of 1 in 700 (the pipe running half full in each case), and would this latter velocity suffice to keep the sewer clear of deposit? To what extent could this velocity be practically increased by flushing?

6. Describe in detail what precautions should be taken, in connecting houses with sewers, in order to prevent the foul gases from the sewers entering the houses? Illustrate your answer by a sketch.

7. In providing a water supply for a town, what are the chief points to which you would direct your attention if the supply is to be derived—(a) from wells; (b) from streams?

8. What is meant by "constant" and by "intermittent" water supply? Explain the advantages and disadvantages of each. Can a constant supply of water become polluted inside a house where there are no cisterns, and if so in what way? What precautions are necessary to be taken to prevent water being polluted inside a house?

9. Describe the construction of an ordinary rain-gauge, and the precautions which should be taken in fixing it. Give instances of the amount of annual rainfall in various places. What weight of water does one inch on an acre represent?

10. Make a figured sketch of the main front and back walls of a house of four storeys, including basement, showing the proper minimum heights of the rooms and the thickness of the walls.

11. What are the most important points to be considered in examining the ventilation of a room? How much cubic space would you require per head—(a) in sleeping rooms; (b) in rooms used for living and sleeping?

12. Make a sketch, and describe in detail the construction of a first-class macadamised road with footpaths.

#### Inspectors of Nuisances.

1. What powers are lodged in local authorities with respect to the prevention of infectious and epidemic diseases?

2. What are the provisions of the Public Health Act with regard to cellar dwellings?



3. Describe some efficient and simple means of ventilating sleeping-rooms. What do you consider over-crowding?
4. In inspecting premises, to what points would you direct your attention to ascertain whether the water-supply is wholesome? (a) In the case of a water-supply derived from wells? (b) In the case of the water being supplied from a town main into a cistern?
5. How should the soil pipes, sink pipes, and overflow pipes of a dwelling be dealt with, so as to prevent any danger to the inmates? What do you consider a proper fall for a 6-inch house drain, and how should it be connected with the public sewer?
6. Describe a bell-trap, a D-trap, and a pan watercloset. State the objections to each, and illustrate your answer by sketches.
7. What are the characteristics of good meat? How do you recognise unwholesome meat and fish, and what are the powers under which they can be seized and condemned?
8. In the inspection of a slaughter-house to what points would you particularly attend?

## MANCHESTER ARCHITECTURAL ASSOCIATION.

THE first ordinary meeting of the above Association took place in the Old Town Hall, King Street, on the evening of Tuesday, November 11.

The Vice-President, Mr. A. H. Davies-Colley, A.R.I.B.A., in the absence of the President, Mr. J. Medland Taylor, M.S.A., addressed the meeting. Mr. Colley was of the opinion that architects were of late years receiving more public attention, and that people were gradually becoming convinced how necessary the profession was for their daily wants and comforts. He thought that the adoption of a professional referee in recent competitions was a very decided and important advance in the welfare of the profession. He argued that the demands on the architect had of late years greatly increased, and that division of labour was very desirable for the production of good work. Those young men would in the future succeed best who, having mastered the groundwork of their profession, devoted their time to one special branch of our calling. He showed that such a state of things existed in the legal and medical professions. Mr. Colley referred to a proposal that the Liverpool Society and the Manchester Association should combine together in the publication of a Sketch-book. He urged its advantages, and thought the scheme feasible.

The prizes for the session 1883-84 were awarded as follows:—*Elementary Class of Design*: 1st prize, Mr. P. E. Barker; 2nd prize, Mr. T. R. Wrigley. *Elementary Class of Construction*: 1st prize, Mr. T. L. Worthington; 2nd prize, withheld.

Mr. T. Chadwick, A.R.I.B.A., rose to support the suggestion concerning the Sketch-book. He referred to the work of the Manchester and Salford Sanitary Association, and spoke of a set of lectures about to be delivered at the Mechanics' Institution, Princes Street, between November 13 and March 26. He hoped that members would attend and benefit by them. He thought that the results of many attempts made to house the poor had proved very discouraging to philanthropists. He referred more especially to some tenements in the neighbourhood of St. Mary's Church, Beswicke, where the tenants greatly abused the conveniences provided for them, wilful damage being often inflicted on the furniture.

Mr. J. S. Hodgeson supported the proposal concerning the joint Sketch-book, and commented on Mr. Colley's remarks.

Mr. F. W. Mee and Mr. J. H. Woodhouse also addressed the meeting.

Mr. T. L. Worthington suggested that steps should be taken to bring the Manchester Society of Architects and the Association in more direct connection, more especially as regarded the prizes offered annually to students.

Mr. J. Brooke, A.R.I.B.A., opposed such a suggestion, and thought that the two bodies had different motives and interests.

## THE PROGRESS OF THE MERSEY TUNNEL.

THE representatives of the Mersey Railway Company have been engaged in an examination of the works on both sides of the river, and in making the final arrangements for the completion of the three and a half miles of line, so as to be ready for the opening. A very few yards of the spacious tunnel under the Mersey now remain to be opened out and bricked in the several sections still unfinished, and these will be completed, so far as the arching and bricking above is concerned, before the present month closes. There remain, however, certain parts of the invert or lower part of the egg-shaped tunnel to take out and brick, and these will take some six weeks before the ballasting can be laid down and made ready for the steel rails with which the permanent way will be made. To the eyes of the stranger, however, the tunnel might appear less near completion in some parts than it did some time ago. The rock saved from the excavation for the purpose of ballasting is stacked along the sides of the structure

for long distances, leaving only room for the trucks to run down the centre. A short time will, however, suffice to dispose of this. Meanwhile, on the Liverpool side landwards the works are complete of the full size to St. Peter's Churchyard, Church Street, and will be pushed forward up the street to form the terminal station. At St. James Street Station the excavation for the lift and staircase is progressing rapidly, the spoil being sent down into the tunnel by two shoots to form ballast for the line. The contract for the station buildings, which have been designed by Mr. Charles Grayson, architect, has been let. These buildings will form an imposing structure, being faced with stone, and comprising a water tower between 80 feet and 90 feet in height. The machinery for the three lifts—each of which will accommodate eighty persons—is in a forward state, and the whole will be completed for service by the time the railway is finished, leaving the rest of the buildings to be completed at greater leisure. In order to give additional accommodation to the immense cross-river traffic for business purposes the Mersey Railway Company have decided to apply to Parliament in the ensuing session for power to construct an inclined approach from Water Street to the James Street Station, along the line of Drury Lane, so that the whole trainful of passengers may be disposed of in two minutes. On the Birkenhead side the excavation for the Hamilton Square Station is completed, and this station, with those at the Borough Road and Green Lane, will be ready by the time the line is ready for traffic. The contractor will have his work done in four months.

## STEAM HEATING.

AT a meeting of the Liverpool Engineering Society on the 5th inst., Mr. R. R. Bevis, jun., president, in the chair, a paper was read by Mr. W. E. Mills on "Steam as a Mode of Heating." The author began his subject by pointing out the advantages possessed by steam over hot water as a mode of heating large buildings. Steam, from its own elasticity, would permeate every part of the system of pipes in which it was employed equally, while water, being itself inert, required power to drive it, especially if the length of piping was at all extensive, and this involved the use of a boiler of considerable dimensions. Owing to the severity of the winters in America rendering some means of artificial heating absolutely necessary, even in dwelling-houses and buildings of moderate dimensions, more powerful than a hot-water apparatus could supply, steam had been adopted in that country to a large extent. The author next proceeded to show, by the aid of diagrams, the arrangement of the supply and return mains, and described the construction of the coils or radiators by which the heat was transmitted to the floors and walls of the building. Inasmuch as by the use of steam a greater degree of heat could be communicated to the piping than was attainable with a hot-water apparatus, the superficial area of the coils and pipes in the former case could be much reduced without impairing the beneficial effect. The author next described the application of steam for the purposes of cooking, and gave details of the vessels and connections best adapted to the system. A discussion followed the reading of the paper.

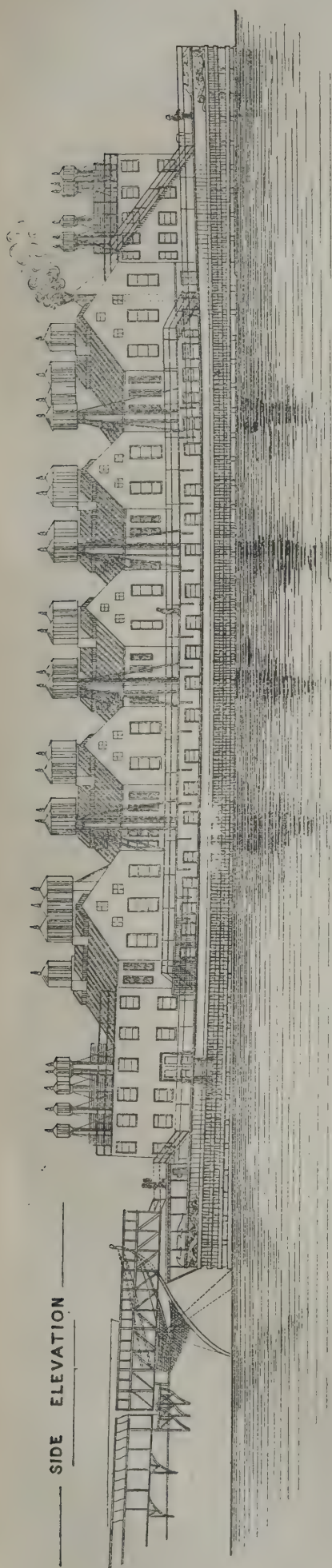
## A FLOATING HOSPITAL.\*

ONE of the wisest acts of the Metropolitan Asylums Board, since its formation, was the acquirement of the *Castalia* (which was originally built on the twin principle for the prevention of sea sickness), and the conversion of the vessel into a smallpox hospital on the Thames. The deck area being extensive it has been found practicable to construct several pavilions and (as will be seen from the plan) to arrange them in such a way as to insure the largest amount of light for each, in addition to unimpeded ventilation. These advantages are important when it is remembered that 200 patients can be received in the *Castalia*. Knowing that in many hospitals there is inefficient ventilation, the Metropolitan Asylums Board invoked the aid of several experts on the subject, Professor de Chaumont being the principal adviser. After careful inquiry it was decided to adopt Messrs. Robert Boyle & Son's system of ventilation, as being the best and most suitable for the purpose. The Local Government Board approved of the selection, and Messrs. Boyle duly received instructions to proceed with the work.

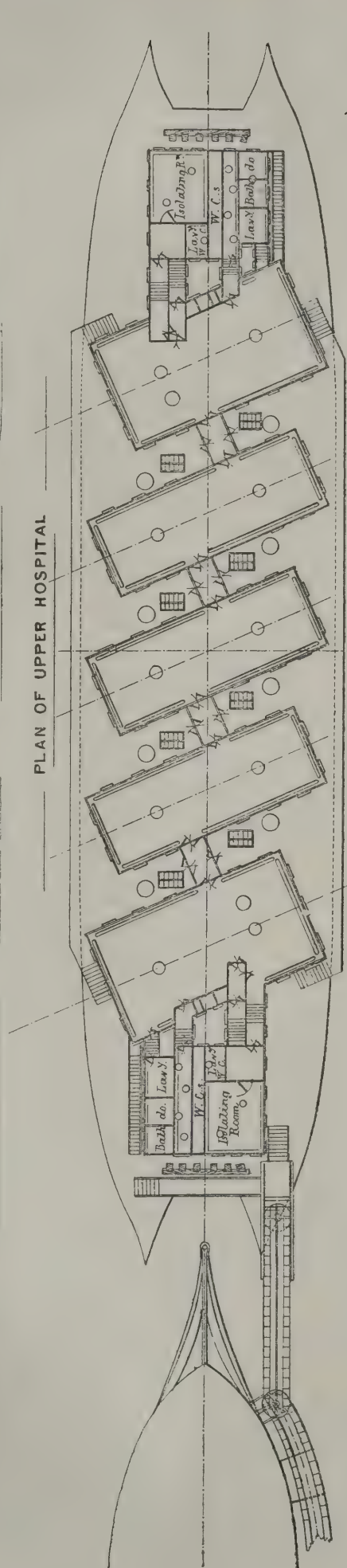
As this is one of the largest and most important ventilating contracts that the firm has yet undertaken, and is considered to be one of the most unique examples of ventilation in this country, or indeed in the world, it is deserving of a detailed notice. For the extraction of the vitiated air there are provided twenty of the self-acting air-pump ventilators, each 6 feet in diameter, connected with the wards by means of iron shafts, measuring from 30 inches to 4 feet in diameter. There are also sixteen air-pump ventilators, 3 feet in diameter, connected with the waterclosets, lavatories, bathroom, and other offices. Fresh air is admitted all round the wards by means of openings cut through the walls at the floor

\* See illustration on page 323.

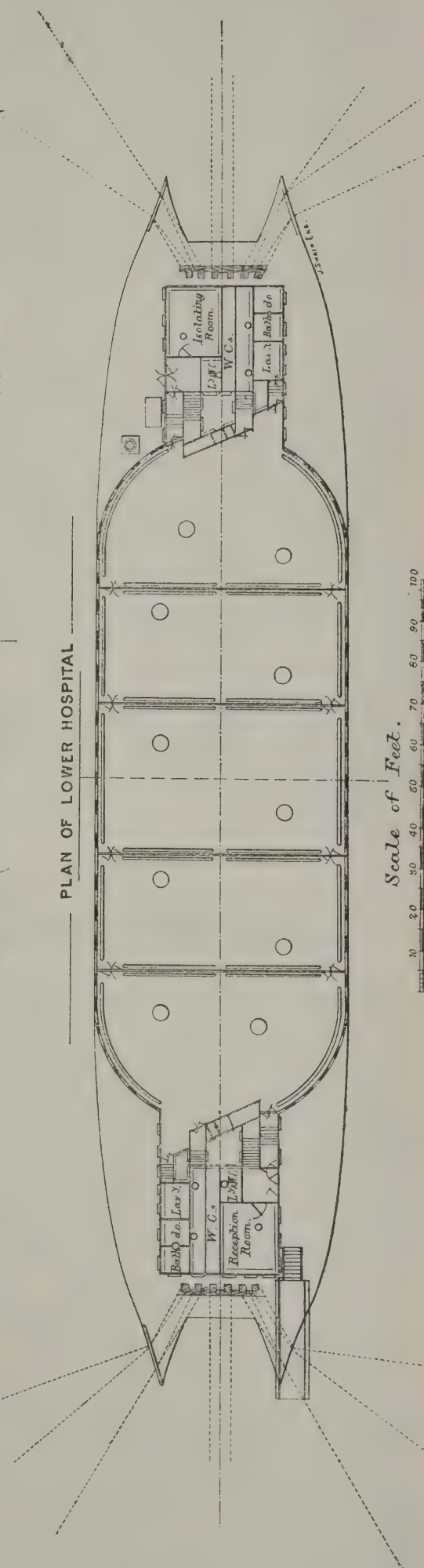




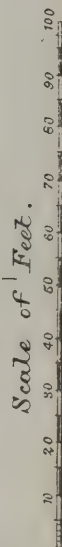
SIDE ELEVATION



PLAN OF UPPER HOSPITAL



PLAN OF LOWER HOSPITAL





level. The air passes over hot-water pipes which are encased in a false skirting made of iron, perforated at the top to permit of the air being equally and imperceptibly filtered in and diffused throughout the wards. The supply of air is regulated by valves or shutters worked by means of screws. This arrangement is that of Mr. Adam Miller, engineer to the Board.

Several scientific and medical men watched the progress of the work, and much interest was excited as to how it would answer. Experiments were therefore instituted by the Board in order to test the efficiency of the system. The results were most satisfactory, indeed, they are stated to have been far beyond anything that was anticipated. After an extended series of experiments to test the air-pump ventilators under atmospheric changes, such as when there was a good wind blowing, and when there was no wind at all, it was found that the ventilators extracted at the rate of 5,000,000 cubic feet of air per hour, the air in the wards being entirely changed once in every five minutes, whilst there was not the least disagreeable draught. During the whole of the tests no appearance of a down-draught was found in the ventilators. Several anemometers were placed in the shafts of the ventilators, and the readings were taken every two hours. Anemometers were also fixed outside to register the velocity of the wind. Messrs. Boyle were not present at any of these tests except the first, the engineers and experts appointed by the Asylums Board being alone entrusted with the trials. Dr. Bridges, Chief Inspector of Hospitals, after carefully investigating the system, expressed his full approval of its action, informing Messrs. Boyle that even when he tested it in a calm, he found a considerable up-draught in the shafts, and at no time any down-draught. Sir Charles Dilke, and other members of the Royal Commission on the Dwellings of the Poor, visited the *Castalia* for the purpose of examining its arrangements, and expressed themselves satisfied with all they saw. Messrs. Boyle applied their system to the *Castalia* under a guarantee, and it is evident that the Asylums Board was satisfied that all the stipulated requirements had been fulfilled, and the system a success, when it is mentioned that immediately after the conclusion of the experiments their account was paid. The system is also applied to the ambulance and transport steamers *Redcross*, *Endymion*, and *Albert Victor*.

From their practical character, the value of these experiments must be very great, as they demonstrate the true worth of Messrs. Boyle's system, and its capabilities. There is only one trustworthy way of proving the efficiency of any ventilating arrangements, and that is by actual and extended practical experience. Lecture-room experiments, as all privately conducted experiments can only be called, may be all very well in theory, and show certain results, but in actual practice the results are generally found to be very different.



#### Awards for Ventilation at the Health Exhibition.

SIR,—With reference to the inconsiderate letter from Robert Boyle & Son, in your issue of last week, I may state that the writers are in error in at least three points with which I was concerned:—

1. They were *not* excluded from the testing-rooms.
2. They were invited by me, in a letter dated the 9th September last, for the July 10, to send their ventilator for testing, in the same terms in which other invitations were issued. I hold their acknowledgment of receipt of that letter of invitation, dated September 12, in which they state that they cannot comply with my request.
3. "The bottoms of the pipes attached to the ventilator" were *not* inside the "tube," as they call it, which was 10 feet in length, not 8 feet. They were outside, and completely isolated from the action of the current.

For the remainder of the letter, which is only abusive, it does not require any notice from me.

Yours obediently,

D. K. CLARK, M.Inst.C.E.

Testing Engineer to Jury 10.

8 Buckingham Street, Adelphi, W.C.:

November 11, 1884.

SIR,—Like Messrs. Boyle, I received no notice to produce a ventilator for trial, and it was only a short time before the trials took place that I heard a rumour about the matter.

Being very much interested in the subject I made inquiries as to where the trials were to take place, and, after some trouble, and greatly to my astonishment, I found the place to be a back room on the first floor of a partly-finished house, viz., 9 Moreton Gardens, Brompton. There I saw the selected ventilators—they were of all sizes. One which has received a medal was a huge affair, about 6 feet high and 4 feet wide; also two or three monstrous cowls nearly as high as the

room, and others varying in size down to about 8 inches, so that under whatever circumstances the trial took place, I utterly fail to see how the small ventilators could compete on terms of equality with the huge monsters pitted against them.

I saw the large wooden tube arrangement, fan, &c., as described by Messrs. Boyle. The fan was driven by *hand* power, and of course the velocity of the blast could not be equal, but could be varied to any extent, and the whole thing appeared to me to be a perfect farce.

The jury should have had a temporary wooden structure erected in the open air, equally divided inside into as many compartments as there were competing ventilators, and each compartment to have had an air inlet, also of equal size, and all in the same side of the structure, and over the centre of each little room a ventilator should have been fixed—all ventilators to have been of equal dimensions as to height, width, and uptake pipe. An anemometer placed in the throat of each ventilator would have registered the extracting power, and the whole thing should have remained intact for one month exposed to all kinds of weather.

It is well known that many ventilators will not act properly when exposed to an open air test such as I have suggested, fog, rain, and dense atmosphere being so prevalent in this country that unless a ventilator will act during all atmospheric changes of the weather it is practically useless, and I fully expected that a most exhaustive trial would have taken place to thoroughly test the respective merits of the various ventilators exhibited.

I received a notice to meet the jury, and went up to town four times for that purpose, but on each occasion they failed to pay me a visit. I think it is, to say the least, an error of judgment on their part in not sending a notice to each exhibitor to produce a ventilator for testing purposes, and, in fairness to the exhibitors, the awards in Class 25 should be readjusted, as there are several very meritorious exhibits entirely ignored.

I Blagrove Street, Reading:

November 10, 1884.

Yours very truly,

GEO. W. WEBB.

SIR,—In your issue of the 8th inst. we see Messrs. Robert Boyle & Son appear to be suffering most acutely for their failure in obtaining the principal award for ventilators at the International Health Exhibition. But we have no doubt most ventilator makers will agree with us when we state that this is the first exhibition in England where ventilators have ever been *tested* in the proper sense of the word. In compliance with a written invitation from the testing engineer, acting on behalf of the International Health Exhibition Jury, No. 10, we sent a 9-inch ventilator to the "testing house," No. 10 Moreton Gardens, having first called to ascertain the mode by which the proposed contest was to be carried out. Finding that the *modus operandi* was as fair for one ventilator as another, whether of the firm of Messrs. Robert Boyle & Son, other makers, or our own, we decided to send our ventilators. Now, the purport of our present remarks is *solely* to refute *mis*-statements contained in Messrs. Robert Boyle & Son's letter; the good taste it displayed we leave your readers to judge. The tests were certainly not carried out in the manner stated by Messrs. Robert Boyle & Son. When our ventilators, the rotating cowl and the fixed finial ventilator, were delivered at the "testing house," our representative noticed that several other makers had previously sent their ventilators. He inquired if Messrs. Robert Boyle & Son had sent. The reply was in the negative. Inquiry was then made whether invitations for this contest had been sent to all exhibitors of ventilators, and an affirmative reply was received. After this, inquiry was made at Messrs. Robert Boyle & Son's exhibit whether they intended to send one of their ventilators to the "testing house." Their representative's reply was worthy of his employers:—"Oh no! our ventilators are sufficiently well known to the jurors," &c. It is therefore clear that Messrs. Robert Boyle & Son must have been aware that tests were being made, even assuming that the invitations to the contest did not reach them. Without regard to efficiency, they at once attempt to disparage another maker's ventilator, on the ground that "it is an old-fashioned and out-of-date cowl, which was patented some quarter of a century ago." It happens that this particular ventilator far surpasses Messrs. Robert Boyle & Son's air-pump, which is to all intents and purposes constructed upon identical lines, with additions which are the reverse of improvements. In speaking of our ventilator, Messrs. Robert Boyle & Son attempt to cast discredit upon the decision of the jury by saying that, Mr. J. P. Seddon being a friend of ours, we had been awarded *five* medals. If Messrs. Robert Boyle & Son were not so rash in their misstatements, they would have seen that our exhibits came under three or four classes, and consequently must have been adjudicated upon by as many juries; hence even Messrs. Robert Boyle & Son must admit that excellency alone has accounted for our success, and this fairly shows it was well deserved, and was not dependent on the advocacy of any individual who may have stated his opinion that Messrs. Robert Boyle & Son's air-pump is a very inefficient ventilator. We have before challenged Messrs. Robert Boyle & Son to a single combat, and we now do so again on the same terms: the loser to pay expenses of contest, and to forfeit his or their 100*l.*, which shall be paid to some charitable



institution; and we will further agree to forfeit the medal which has been awarded to us at the International Health Exhibition if we are the losers. The challenge to be taken up within one month from date, after which time, if not taken up, we shall consider that Messrs. Robert Boyle & Son admit the superiority of our ventilators over their so-called Self-acting Air-pump Ventilator. We regret being obliged to ask you for so much valuable space, but we do so in the interest of fair play and justice.

Yours very truly,  
BANNER BROS. & Co.

#### The Institute Diploma.

SIR,—Although it may seem presumptuous on my part to take up this matter after reading the concluding sentence of your correspondent's letter in last week's issue, still I should like to make a few suggestions on the subject of the Diploma he advocates. The "Diplome d'Architecte" works well among our French brethren; why should it not work equally well here? Because, I suppose the reply will be, we are a nation with non-academic notions, and refuse to be fettered by laws of art which in other countries reign supreme. Very good, according to our insular notions; but, still, as has been shown in Mr. White's able paper read at the Institute the beginning of this year, we might with advantage borrow a few ideas from the French mode of art training. The principle Mr. Mowbray advocates is a good one, but the application; I take it, is the weak point of his suggestion. We have a Royal Academy of Arts to which all classes yield more or less obedience. Why not let the Diploma emanate thence? As a profession we want more countenance from this leading body or art guild; for are we not an integral part of its constitution, with our school and annual exhibit within its walls? Moreover, this would be a graceful recognition on its part of an art that in reality comprises all others. This Diploma then, coming from the, I may say, acknowledged head of the artistic world here, would be able to embrace all able members of the profession, whether belonging to any society or not. Let its motto be "*Palmarum qui meruit ferat*," and its success will be assured. I would humbly suggest that a Commission should be appointed, not so much to examine the applicants for the honour, as to judge of the merit of their actual work executed or otherwise. An examination on the lines of that for associateship at the Institute would be a manifest absurdity, for how many really able architects would care to have to pass a severe test in advanced mathematics who nevertheless have executed buildings of the most intricate and difficult construction. Of course to certain members of the profession the Diploma would be granted without question—*Cela va sans dire*. Finally, I would further suggest that it be granted in the same manner as the membership of the Academy—by application. Should this idea of Mr. Mowbray's, by the sanction of Parliament, happily become law, we may hope in time to see the honest followers of a noble profession brought forward to the place they ought by right to occupy, and their unworthy imitators relegated to the limbo of deserved obscurity. Then, perhaps we should see less of that pretentiously crude building, a jumble of all styles and an outrage against all laws of proportion and canons of art, which in so many places in this country of ours has usurped the name of architecture.

I am, &c.,

PERCY G. STONE.

16 Great Marlborough Street, London, W.:

November 11, 1884.

#### The Crime of Youth.

SIR,—Some remarks in your leader of November 8 on the opening meeting of the Royal Institute of British Architects will hardly commend themselves as sound to young men in general, nor perhaps to all men of "age and experience." Your contributor assumes that youth has carried off the late competition for the Government offices. If I am not mistaken, I think I can remember the names of Leeming & Leeming as a firm in practice quite a dozen years. But, apart from this, is it not generally the case that a man of talent and genius comes to the front in early youth? One is tempted to imagine that your contributor may be some elderly gentleman who has plucked more sour grapes than ripe plums under the competition system. Possibly he entered the lists in the late competition, and found that "age and experience of the best" must be judged according to merit, rather than to undoubted age or supposed experience—for the writer cannot be a young man. Surely Street, Scott, Burges, Pugin, &c., were once young men; none of them, unless it were Scott, ever lived long enough to be old. But would your contributor assert that a "learned society" would have been turned into a "debating club" because any of these geniuses had read papers or joined in debates when they were emphatically young men? I know plenty of worthy old buffers, with plenty of age and lots of experience, who would never set the Thames on fire, to whom it comes easier to talk twaddle than sense.

I am, Sir, yours obediently,

A YOUNG MAN.

#### The Restoration of Westminster Abbey

SIR,—In February last a communication was published in one of your daily contemporaries, stating that the ruinous condition of the abbey required the immediate expenditure of about 80,000*l.*, and giving a lamentable picture showing decay to have been its normal condition for centuries. No separate funds appear to have been set apart for the repairs of the fabric in pre-Reformation times; but as the abbey was in close connection with the Crown, as kings were crowned and buried in it, and as the abbots were individually rich, there was not in those days much difficulty as to the necessary outlay.

Under Henry II. Abbot Laurence obtained a grant and leave to impropriate livings from the King and the Empress Maud; and Henry III.'s benefactions were continued by many of his successors. But in Edward IV.'s time the fabric required a special effort. In 1478 the King wrote a letter to the Pope, in which he said:—"We pray you that the Apostolic See should condescend to succour the monastery, which is now not only tottering, but almost fallen, and which is on the point of utter ruin." From 1600 there are a few records of expenditure. Dean Williams spent 4,500*l.* on the exterior of the chapels. Dean Dolben prevailed upon the Chapter to devote henceforth one-fifteenth share of their incomes. In 1697 a petition from the Chapter to the House of Commons stated that since the Restoration they had expended 20,000*l.*, and that 40,000*l.* was then urgently required; whereupon an Act was passed assigning one-sixth of the duty on coals imported into London, "for the repair of the collegiate church, and for no other purpose whatever," until 1716. After this a new Act was passed, and then commuted, by which 4,000*l.* appears to have been paid annually till 1741. In 1807 the Chapter state in a petition that they have expended during twenty years nearly 29,000*l.*; whereupon grants amounting to 42,000*l.* were made between then and 1822. Since that time to the transfer of the estates to the Ecclesiastical Commissioners, the one-fifteenth share agreed to in Dean Dolben's time was always devoted to the fabric repairs.

And yet, as stated in the architect's recent report, this constant expenditure has been quite insufficient to keep the abbey in proper repair:—"Beneath the coating of grime and dirt which conceals from the eye of the casual passer-by, there has long been going on a process of decomposition which, if not arrested, must speedily cause the ruin of the building. The decay of the wall surfaces has penetrated 7 inches or 8 inches. In some places the walls are dangerous, pieces of stone constantly falling upon the roofs below." The communication I have referred to goes on to state that negotiations between the present Dean and Chapter, the Ecclesiastical Commissioners, and the Government were in progress for the expenditure of 80,000*l.* upon a general restoration of the exterior of the abbey.

And preparations for this are going on, but the lamentable and touching historical sketch of the fabric which I have just given will probably suggest to others, besides myself, the inquiry whether something durable rather than perishable cannot be done in this nineteenth century, when science works such wonders that we have scarcely gained our breath over the astonishment of one discovery before we are startled with another.

As the report says nothing as to any improved method of procedure on the new masonry, and as this is a national building of unequalled historic interest, I trust I shall be pardoned by the accomplished architect to the Chapter for venturing to recommend a simple but effectual safeguard for the future.

To restore the abbey as it has hitherto been restored—only to require re-restoring by the next generation, or sooner—will be such a disgrace to us that surely the possibility of it only requires to be stated to secure adequate care being taken for its avoidance. Happily, in this case, there is no practical difficulty. All that is necessary is to determine to adopt a wise economy, the spending of a little extra money at the outset upon the best and most durable material, instead of blindly following the foolish customary practice of the present day, of using a soft absorbent and, therefore, perishable stone, for the sole reason that it is easy and consequently cheap to work. All Government works are at present executed with perishable Portland stone. To select a stone that admits of abundant elaborate carving at little cost is, perhaps, pardonable in a second or third-rate building, erected under the short leases common in London, but in the case of our noble abbey, or any other national structure, assuredly no condemnation of such a course can be too strong. We have daily before our eyes in London the evidence of materials that are of everlasting durability, and also of those that perish sooner or later. With our lamentable experience at the royal abbey, of the decay of Sir Charles Barry's Treasury, of one of the porticoes of St. Paul's giving way, of our yearly expenditure of 2,500*l.* on the restoration of the Houses of Parliament, of 82,000*l.* recently spent on the Archbishop's palace in Lambeth, and the costly repairs of numerous other limestone buildings, is it possible that we can longer continue to build in a manner rather reminding us of the puerile efforts of our boys on the seashore than of the solid works of past ages, that have come down to our own age untouched by the hand of Time? I need not here repeat the remedy for this regrettable state of things, which you, Mr. Editor, have more than once



allowed me to lay before your readers (the appropriate use of the igneous rocks), because it is applicable rather to a new edifice than to the restoration of an old one like the abbey. But the *principle* is applicable to both. The abbey is striking in effect from its magnitude and complexity of plan. Its style and details are very simple. The slight difference of cost, then, of the labour in working a hard and durable stone instead of a soft and perishable one, should be accepted without hesitation in the interest of true economy. I therefore venture to urge those who are responsible, and who doubtless feel that they are acting in this matter for the nation at large, to examine the perfect state of the stone of the Nelson monument in Trafalgar Square, built about forty years ago. It is a carboniferous sandstone from the Craigleith Quarry, near Edinburgh, and its durability in the acids of the London atmosphere is remarkable. This doubtless is due to the large proportion of silica in its composition, namely, 98.3 per cent., and its small percentage (1.1) of carbonate of lime. Portland stone, now universally and most mistakenly used for Government buildings, contains, on the contrary, only 1.20 per cent. of silica and 95 of carbonate of lime—a material rapidly destroyed by the acids which abound in our atmosphere. Craigleith stone has been largely used for public and private buildings in Edinburgh, including the University, Law Courts, Exchange, National Monument, and numerous churches. In colour it is much warmer than Portland. There are English stones of very similar quality and of equal durability, but I have specially noticed Craigleith stone, because there is in London proof of its imperishable nature within a few yards of the abbey. Among others, I may mention Darley Dale stone, with 96 per cent. of silica; Heddon, with 95; Kenton, with 93—all which would probably be as durable as Craigleith stone. It is true that this silica renders these stones very hard; but machinery is available which converts the toughest materials with surprising rapidity into blocks suitable for building; and, as I said before, the architectural details of the abbey are so simple that the quantity of hand labour, in addition to the mechanical work, would be small. The question then is—Shall Westminster Abbey be *permanently* restored with a hard stone or *temporarily*, with misplaced economy, with soft perishable stone?

Yours truly, T. V. S.

#### Publication of Tenders.

SIR,—Will you kindly give us your opinion on the following point of professional etiquette? We tendered a few months ago (in response to an advertisement) for reseating St. Cuthbert's Church, Darlington, with oak seats. Tenders were sent to Mr. F. Parr, architect, Darlington. Some weeks after that, in reply to our second letter of inquiry, the architect replied that the contract was let to Mr. A. B., of C.

We wrote him very civilly, asking for information as to the amount of the accepted tender, saying that we always liked to have an idea how our tender ran by judging it by the accepted one. Mr. Parr replied:—"I must certainly decline to give the information requested, and I may add that yours is the first application that I have ever received to disclose the amount of the accepted tender." To this we replied that during forty years' experience we had never known such information to be refused, and stated that we generally found architects and building committees only too glad to furnish the information, and thus show to the public, and especially to competing contractors, that they were fairly dealt with.

To this Mr. Parr replied:—"I beg to reiterate the assertion made in my former letter, that yours is the first formal demand I have received to disclose the amount of an accepted tender; and allow me to add to the knowledge you have gained in *forty years' business connection*, that a tender is a private document, and unless it is stated that the amount of the tenders will be published, neither the architect or proprietor have any right to disclose the particulars of any such tender. Kindly permit this correspondence to drop here."

We should feel obliged by your opinion on this matter, as to whether Mr. Parr's letter expresses the rule of the profession, or whether our very civil inquiry was usual and in order.

Yours truly,

GEO. GRADON & SON.

Durham: Nov. 12, 1884.

[There is nothing unusual in a request by a contractor for information respecting tenders. It will sometimes happen that the amount of the accepted tender has to be kept secret, as in cases where building owners wish to make the public believe that they are about to expend a larger sum on their premises; but there should be no concealment in regard to the publication of contracts for churches or other public buildings.—ED.]

#### The Derby Asylum Competition.

SIR,—There is a rumour in the air that one of the competitors of the Derby Lunatic Asylum competition has had his design rejected on account of his estimate—32,000*l.*—being too high. This, of course, is too good a joke to be true, as I should suppose

the Derby authorities would know from experience that nothing like that sum would be sufficient to carry out the work. This competition has been about a most unreasonable time, and I believe I am justified in saying that the whole of the competitors would feel more justly treated if a competent and independent assessor was called in to advise the committee, not only as to the merits of the designs, but also as to the trustworthiness of the estimates.—I enclose card, and am, Sir, &c.,

November 12, 1884.

T.

#### REVIEWS.

FLATLAND. By A. SQUARE. (Seeleys & Co.)

In this book we have an account of a country that is not to be found on any atlas hitherto published, and is unknown to the enterprising followers of Messrs. Cook & Sons. But as the author, Mr. Square, is a native of Flatland, we can consider his account to be as veracious as the descriptions of other remarkable places which have been written by Lemuel Gulliver. The peculiarity of Flatland is that everything in it is absolutely deficient of a third dimension. There are only two dimensions. Men, women, cattle, trees, houses, are, like the subjects of Euclid's six books, either lines or surfaces. Mr. Square tells us—and we have no reason to doubt his statement—that statesmen in Flatland are circles, professors are squares, tradesmen are triangles (the equilateral being considered the most respectable), soldiers are isosceles triangles, each having a narrow base and sharp apex. Pope says that most women have no character at all, and the Flatland ladies are only straight lines. There is, however, compensation in everything, and, by the peculiarity of their organisation, they are made most dangerous to the men, for whether seen in front or from behind, they are so attenuated that their fellow-citizens are wounded before they are aware of the presence of danger. To prevent accidents, all kinds of wise precautions have to be taken against womankind. Two doors are made to the houses, a large one for the men, a narrow one for the women; extremely small rooms are also provided for the latter, in order that their male friends may be comparatively safe. In the houses there are many peculiarities besides doors. Flatland architects are great in planning, and it is a pity that one of them was not induced to study the conditions of the competition for the Admiralty and War Offices. We do not suppose that the contest would attract the least eminent practitioner in Flatland, but some of the younger members might have been inspired to send over a few suggestions. Considering that in Flatland it is impossible to see the shape of anyone, for as one's self and one's friends would be both on one plane, each must seem only as straight lines to the other, whatever be their normal form. May we not therefore conclude that the author can only have discovered the appearance of his neighbours by a philosophical course of experience, that is, by having in the jostling of life had to feel (for length and breadth can surely have feelings) their various sides and angles? If, however, we admit the test of experience we might be tempted to say that Mr. Square is not so impartial as he professes to be, and his statement that the female sex consists of straight lines, dangerously acute at each end, is probably evidence that Mr. Square is rather advanced in years, and has been jilted more than once. Unless mathematical truth, as it is expounded in Cambridge, does not hold in Flatland, we see no reason why the women should not be described as ellipses instead of lines. They would thus be more perfect than the circular statesmen who have but one centre to their being, whereas an elliptical woman would have two foci and an endless variety of outline. Beings may shrink with age in Flatland as elsewhere, and although Mr. Square probably was constituted of honest right angles when he was young, his sides may have since become concave, his angles more acute, and who knows if he has not reached the formation of a cross? In that case he is, when at home, no doubt more than a match for his wife, offering four dangerous points to her two. We might even go so far as to say that the origin of the narrow doors in the Flatland houses arose from the necessity of giving facility for the escape of women when pursued by their irate lords. But we speak under correction, and shall be glad to hear what Mr. Square has to say on this subject. Mr. Square is also a traveller, and has visited Lineland, a country which consists of a straight line. The inhabitants are also straight lines of various dimensions, moving backwards and forwards in their linear world. Mr. Square relates how, on one occasion, he frightened the King of Lineland by his appearance. No inhabitant of Lineland could conceive, far less explain, the existence of such a form; there was no word in their language to express a surface, the idea of two dimensions being absolutely foreign to their nature. Spaceland, the land in which we live (consult Stieler's atlas), was also visited. Mr. Square cannot by any effort of his intellect comprehend the third dimension which forms solids, and therefore he labours under some difficulty in travelling among us. But our land appeared to him like some dream of light, of a brilliancy surpassingly great and magnificent, but inexpressible. The encomiums of a man of his experience are flattering. Nevertheless, he has no doubt the reality of Spaceland. When he was pro-



fessor of mathematics in Flatland Mr. Square taught that quantities exist not only in their first or second powers, which are accounted for by lines and surfaces, but that they can be elevated to an infinity of powers. Therefore, although he cannot conceive anything beyond surfaces to represent mathematical results, yet he cannot resist the conclusion that there are other dimensions, other worlds, other realities besides those his brain is capable of comprehending. His speculations on mathematics are accordingly far more notable than those of Sir William Rowan Hamilton when he predicted the form which objects must assume when seen through a mineral of a certain form. There are readers who may hesitate to accept everything that is said by Mr. Square, especially if they only once read his book. Hamlet tells us there are more things in heaven and earth than are dreamt of in our philosophy, but while we repeat the lines glibly we hardly accept them as words of wisdom. The inhabitants of Flatland, in spite of their good sense, may likewise hesitate in believing all Mr. Square can tell them about ourselves. Meanwhile we recommend all our friends to read "Flatland." They will find in it as limitless fields for their thoughts as in Carlyle's "Sartor Resartus," with the great advantage that "Flatland" is written in good English instead of debased German.

## LEGAL.

### Queen's Bench Division.

(Before Mr. JUSTICE DENMAN, without a Jury).

PLIMSAUL v. LORD KILMOREY.

#### PAYMENT FOR QUANTITIES.

This action involved the question whether a quantity surveyor employed by an architect is entitled to be paid for his services by the building owner for whom the architect is acting, or whether his claim is against the architect alone. Lord Kilmorey engaged Mr. Thomas Verity in 1878 as an architect to direct alterations in the St. James's Theatre, of which his lordship was the owner. Upon the recommendation of Mr. Verity, a Mr. Bradwell was entrusted with the work as builder. There was no written contract between the parties, and as the work proceeded the defendant made payments from time to time to Bradwell of amounts certified by his architect. In July 1879, Mr. Verity retained the plaintiff, as quantity surveyor, to measure up all the work which had been done upon the theatre for the purpose of a final settlement of accounts with the defendant, and the plaintiff now sued the defendant for 187*l.*, the amount of his charges at the usual rate of 2½ per cent. upon the value of the work executed and certified by him. The architect had appended the plaintiff's charges to the builder's account, and forwarded the latter to the defendant, who, however, had refused to pay it upon the ground that the sums claimed by Bradwell were excessive. An action brought by Bradwell for the amounts so charged was referred to Mr. Dowdeswell, the official referee, who considerably reduced Bradwell's claim. In that action the amount of the plaintiff's charges was included in the claim against the defendant, but was disallowed by the referee. The plaintiff now contended that, by a general usage or practice of the building trade, an architect is authorised to employ a quantity surveyor to measure up the work which has been executed for the purpose of a final certificate. That his commission is charged in the builder's account, and on payment to the builder the amount is handed by the latter to the surveyor. This usage was deposed to by the plaintiff, Mr. Verity, and a Mr. Nixon, a quantity surveyor of large experience. It appeared, however, that previous to the retainer of the plaintiff, which was upon July 9, 1879, there had been communications between Mr. Verity and Mr. Maddox, the defendant's solicitor, in the course of which dissatisfaction on the part of the defendant with the builder's charges and the amounts certified by the architect was expressed. Mr. Maddox conveyed to Mr. Verity the intimation that the defendant intended to have the work measured by an independent surveyor, to close accounts with the architect and builder, and to take the work out of their hands. Upon July 5, 1879, Mr. Verity in a letter to the defendant's solicitor said that as the defendant had questioned the charges which he had certified for, it would be well that his surveyor should go over the works with those appointed by his lordship. Further, that he should charge to the defendant all the expenses he might incur in vindicating the correctness of the accounts. In cross-examination Mr. Verity said, his attention being directed to the above passages, that by his surveyor he meant the plaintiff. Mr. Nixon, in answer to a question put by the learned Judge, stated that where a dispute had arisen between a building owner on one side and his architect and builder on the other, it would make a difference in the operation of the custom above noticed.

Mr. Justice Denman, in giving judgment at the close of the plaintiff's case, said that with respect to the general usage of which evidence had been offered, he thought a jury would hesitate to establish it. There were good grounds for considering it unreasonable as applied to circumstances such as were presented in this case, and it must often prejudice a building owner. Whatever

the validity of the custom, the evidence with regard to it was displaced by Mr. Verity's letter of July 5, which made it apparent that he employed the plaintiff as his own surveyor, in view of the differences which had arisen between him and the defendant. This was made more clear by the intimation that he would charge the defendant for the expenses which he might incur—alluding to the charges which the surveyor would make for measurement.

Judgment was accordingly given for the defendant with costs.

## CHURCH BUILDING AND RESTORATION.

**Nottingham.**—The chancel of St. Ann's Church has been reopened after enlargement. The work has been carried out by Mr. H. Vickers, builder, of Nottingham, in accordance with the original design of the architect, Mr. R. Clarke, of Nottingham, and the alteration will furnish additional seats for sixty-four members of the choir.

**Nuttall.**—The church of St. Patrick, recently restored, has been reopened. The building consists of a nave of three bays, with north aisle, chancel, west tower, and a porch on the south side of the nave. To this has now been added an organ chamber and vestry on the north side of the chancel. This and other improvements have been executed by Mr. Baines, contractor, of Newark, assisted by Messrs. Thompson. Mr. J. Fowler, of Louth, is the architect.

**Brighouse.**—The memorial-stones of a Wesleyan chapel have been laid. The cost of the building will be about 4,700*l.* Accommodation will be provided for 950 persons. The architect is Mr. Judson, of Bogthorn, Keighley.

**Blackburn.**—The foundation-stone of a Wesleyan Free Church, in Regent Street, Blackburn, has been laid. It will be Gothic in style, and built of brick, with Yorkshire stone dressings. Both church and school are provided in the building, the former fronting to Regent Street, and the latter, which is underneath, being entered from a passage at the left-hand side, having a gate in Regent Street. On the other side there will be another passage between the church and the houses leading to the minister's vestry, which is provided at one end of the building, and near the pulpit rostrum. The church is estimated to hold 520 people, and the school about 300. The building when completed is expected to cost about 1,000*l.* Mr. J. W. Shorrock, 17 Victoria Street, is the architect, and the contractors are Messrs. Fletcher & Bolton, and Mr. Joseph Panter, all of Blackburn.

## SCHOOL BUILDINGS.

**Kidderminster.**—The foundation-stone of a girls' school for St. John's parish has been laid. Besides the new school, alterations in the existing schools are to be made, which will involve a total expenditure of 2,500*l.* The cost of the girls' school will be about 1,400*l.*, and it is being built by Mr. H. Smith from the plans of Mr. Meredith.

**Burslem.**—The memorial-stone of a Congregational hall and schools has been laid. The architect for the new building is Mr. A. R. Wood, of Tunstall, and the builder, Mr. Cook, of Burslem. The interior of the building comprises an assembly-room (56 feet by 36 feet, and 34 feet high), which is surrounded by fourteen class-rooms, all opening out of the assembly-room. There is a gallery at one end of the assembly-room, and a kitchen for tea-meeting purposes, and lavatories are provided. Mr. Jabez Thompson, of Northwich, supplied the terra-cotta, and the Sneyd Colliery Company the bricks.

## NEW BUILDINGS.

**Leeds.**—The St. James's Hall Coffee Palace, Leeds, has been enlarged. The new wing comprises in the basement large provision stores, and on the ground floor a dining hall, 34 feet by 20 feet. The walls have a dado of ornamental glazed faience, and the ceiling is panelled with moulded ribs, with ornamental cornice and deep frieze. Adjoining is an entrance from York Street, from which a stone staircase leads to the top of the building. A further entrance is provided from the cross street with stone stairs giving access to the basement and the upper rooms. The present dining-room will be enlarged. On the first floor are a ladies' coffee-room, a committee-room, retiring-rooms and lavatory. The new orchestra in connection with the existing lecture hall provides sitting accommodation for 150 persons. The second and third floors are utilised almost entirely for bedroom accommodation. The top-most floor is used entirely for the kitchen department. The new wing harmonises with the existing structure, so far as the leading lines and general grouping are concerned; but it is in a later phase of Gothic, with some Flemish characteristics. The building has been erected from the designs and under the superintendence of Mr. William H. Thorp, Leeds. The contractors were Messrs. Franks and Evans, Leeds; the total outlay will reach 6,000*l.*



## SANITARY WORKS.

**Pontefract.**—The Corporation of Pontefract have just completed the whole of the drainage scheme, extending throughout the borough, at a cost of about 20,000*l*. The works have been carried out by the contractor, Mr. John Simpson, of Hunslet, Leeds. The outfall works are situate about two miles from the town. Since the works were completed the Corporation have had to repave or macadamise every street in the borough, and this undertaking fast approaches completion. Trees have also been planted on either side of the street leading to the Castle grounds, and other street improvements carried out.

## WORKS IN PROGRESS.

**Messrs. Archibald Smith & Stevens**, of Queen's Road, Battersea, have been instructed to erect for Messrs. Spiers & Pond, at the Windmill Restaurant, Cannon Street, one of Stevens & Major's patent hydraulic suspended lifts, to be worked in connection with the Hydraulic Power Company's mains.

**Sewerage Works, &c.**—The Kettering Local Board have accepted the tender of Messrs. Arthur D. Studd & Co., of Kettering, engineers and founders, for the supply and erection of machinery. The system to be adopted is that of mixing the sewage with a proportion of lime in circular stirrers, and then passing it through a series of filter beds or tanks, finally discharging into a running stream as clear water, the residuum being collected periodically from the filter beds or tanks, which are in duplicate, one set being used while the others are cleaned out.

**Ventilation of Public Buildings.**—Messrs. Robert Boyle & Son, 64 Holborn Viaduct, and Bothwell Street, Glasgow, have applied, and are at present applying, their system of ventilation and Self-Acting Air-Pump Ventilators to St. Mary Redcliffe, Bristol, under the direction of Mr. Arthur W. Blomfield, architect; Christ's Hospital (Bluecoat School, second application); Bank of England, Liverpool; Reform Club, Liverpool; Public Hospital, Liverpool; District Hospital, Somerset; Town Hall, Sandwich; Beckett Hospital, Barnsley; National Schools, Stratford-on-Avon; "Laranstein," near Arnheim, Holland; Shorncliffe Camp of the Royal Engineers; Lambeth Carlton Club, Brixton; Grand Pump-Room, Bath; St. Owen's Parish Hall, Jersey; St. Lawrence Parish Hall, Jersey; Bishop Lightfoot's Institute, Bishop Auckland; Maidenhead Town Hall; Royal Infirmary, Naval Schools, Greenwich; Town Hall and Police Court, Dudley; Jewish Working Men's Club, Whitechapel; Devonshire Hospital, Buxton; Bilston Town Hall; Malton Theatre; Llandudno New Board Schools; Post Office, Chesterfield; Union Workhouse, Chesterfield; Inland Revenue Offices, Lincoln; Devon and Exeter Hospital, Exeter; Stroud Union Workhouse; Council-Chamber, Keighley; New Police-Station, Wandsworth; Council-House, Birmingham; Smallpox and Fever Hospital, Birmingham.

## GENERAL.

**The Competitive Designs** for the national memorial of Gambetta (the second competition) will be on view at the Salle Melpomène, Ecole des Beaux-Arts, Paris, from to-day until next Thursday.

**The Exhibition of Incoherent Arts** has been financially successful. The receipts having been sufficient to cover expenses, the returns henceforth will be nearly profits for the fund.

**An Exhibition of Designs** by the late Gustave Doré has been opened in the Boulevard Saint-Germain, Paris. They are selected from the large number produced by the artist for illustrated books. The contents of Doré's studio will shortly be sold by auction. Among them are designs for a proposed edition of Shakespeare.

**M. Fraikin** has nearly completed the statue of Leopold I., which is to be placed in the Chamber of Representatives, Brussels. It is a reproduction on a larger scale of a statue of the King which stood above the President's bureau in the Palais de la Nation before the building was destroyed.

**The Administrative Council of Fine Arts for Paris** is to be constituted as follows:—The Prefect of the Seine; the president of the Municipal Council; M. Alphand; M. Renaud, chief inspector of the Beaux-Arts; MM. Hattat, Collin, Cernesson, Vauthier, Boll, and Delhomme, municipal councillors; MM. Hébert, Jean-Paul Laurens, and Lavastre, painters; MM. Fauguère, Dalou, and Crauk, sculptors; MM. Bailly, Ballu, and Lisch, architects; M. Bracquemond, engraver; M. Chaplain, medallist; and M. Liouville, former member of the jury of sculpture.

**The Rector of Wychling Church** makes an appeal for funds to rebuild the church, which last Easter, he writes, fell into a complete ruin and was closed, and now the chief walls of the building have been condemned as unsafe, and must be rebuilt, considerably increasing the expense. During the last four years the amount raised in response to some nine thousand personal letters only realised 800*l*. The estimate of cost is 2,000*l*.

**The Royal Society of Painters in Water-Colours** have elected Messrs. William Collingwood and R. Thorne Waite to be members.

**The late Sir Erasmus Wilson** has bequeathed to the South Kensington Museum (after the death of Lady Wilson) three paintings, viz., a sea piece by Salvator Rosa, a cattle piece by Sidney Cooper, R.A., and *A Hurricane in the Bay of Biscay*, by E. W. Cooke, R.A.

**Dr. E. Rowand Anderson** has been nominated grand architect to the Grand Lodge of Scotland.

**Mr. T. Arnold, F.R.I.B.A.**, read a paper on "Celtic Art" at the meeting of the Gaelic Society of London, on Wednesday.

**Mr. J. Donovan Adam** has been elected an Associate of the Royal Scottish Academy.

**An Art Union** in connection with the Glasgow Institute of the Fine Arts has been formed with the view of promoting interest in art throughout all sections of the community. Mr. Robert Walker, the secretary of the Institute, will act as secretary.

**Mr. G. L. Gomme, F.S.A.**, will deliver an address on "Some Archaic Types of Society in Scotland" at the annual meeting of the Glasgow Archaeological Society on the 20th inst.

**The Glasgow Art Club** have elected the following members:—Mr. Alexander Roche, Mr. John Carlaw, Mr. William Kennedy, Mr. Hamilton Maxwell, and Mr. G. F. Henry.

**Mr. T. Stuart Burnett, A.R.S.A.**, has completed a full-length statue in marble of Rob Roy, the Highland chieftain, which was commissioned for a house in Hyde Park Terrace.

**Mr. Brock, A.R.A.**, has received a commission for a colossal bronze statue of the late Sir Erasmus Wilson, to be erected outside the Margate Infirmary.

**The Council of the British Association** have decided to hold the meeting in 1886 at Birmingham. The claim of Manchester was withdrawn in favour of that town.

**The Town of Mossley** has applied for a charter of Incorporation. At the inquiry of the Local Government Board it was stated that since 1863 the population had risen from 7,000 to about 15,000; the number of inhabited houses in the same period had increased from 1,450 to 3,032, and the rateable value from 22,000*l*. to 50,408*l*.

**Dumfries Prison**, which is one of the most substantial buildings in the south of Scotland was recently purchased by the Mechanics' Institute at 1,900*l*., but the cost of suggested alterations was so large that it has been resold for 2,050*l*. It is proposed to build a church and hall on the site.

**M. Alphand**, the Director of Works in Paris, has in his report to the Prefect suggested the appointment of a Minister of Health, who would undertake the duties which are entrusted, with many others, to the Minister of Commerce.

**"Macbeth"** has been successfully revived at the Odéon. The designs of the costumes are supposed to have been all derived from drawings in the British Museum. The scenery has been painted by MM. Rubé and Chaperon.

**The Hastings Town Council** have decided to offer 20,000*l*. for the land comprising the East and West Hills, which were likely to be used for building purposes, and containing about 140 acres. Ecclesbourne Glen is, however, not included.

**A Government Hospital**, with a medical school on the plan of Guy's, is proposed for Dublin. Earl Spencer has offered to contribute 5,000*l*. towards the work.

**The Social Democratic Federation** includes in its programme the compulsory construction of healthy artisans' and agricultural labourers' dwellings in proportion to the population, such dwellings to be let at rents to cover the cost of construction and maintenance alone.

**A Course of Free Lectures** on sanitary subjects will be shortly delivered before the Sanitary Assurance Association.

**Mr. Maurice Fitzgerald** has been appointed to the Professorship of Engineering in the Queen's College, Belfast.

**The Ruchill Sawmills**, near Maryhill, which have been standing idle for several years, have been purchased by Messrs. M'Farlane, Burns & Co., of Corn Street, Glasgow.

**Sir Gilbert Greenall** has offered to give 1,000*l*. towards the new schools at Latchford, Warrington, on condition that the remaining 1,500*l*. is contributed.

**"Littlecroft."**—This house, which was illustrated on the 1st inst., was erected by Messrs. Payne, of Emery Down, under the direction of Messrs. Ernest George & Peto.

**Mr. J. C. Prestwich** has received instructions from the Sanitary Commission at Stockport to obtain estimates for the proposed new baths.

**Mr. W. T. Oldrieve**, of H.M. Office of Works, Edinburgh, has been awarded a special prize of 50*l*. by the Executive Committee of the International Forestry Exhibition for his essay upon "Maintaining the Supply of Teak."

**Messrs. Perry & Co.**, of Tredegar Works, Bow, have obtained from H.M. Office of Works the contract for the next 3½ years for the general repairs to all the Palaces, Houses of Parliament, Courts of Justice, Post-offices, and civil buildings generally in the London district.



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, NOVEMBER 15, 1884.

### EDITORIAL NOTICES.

The authors of signed articles and papers read in public must necessarily be held responsible for their contents.

No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.

Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.

### TENDERS, ETC.

As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—"Contract Supplement to THE ARCHITECT."

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Special arrangement may be made for a series of insertions on application at the Office, 175 Strand, London, W.C.

### CONTRACTS OPEN.

ACTON.—Dec. 2.—For Construction of (Contracts 1 to 5) Main Sewers, Effluent Outfall Sewer to Thames, &c. Mr. C. Nicholson Lailey, Engineer to the Local Board, Acton.  
ANNALONG.—Nov. 26.—For Execution of Works at Harbour. Mr. James Gordon, Annalong, County Down.  
BACUP.—Nov. 17.—For Altering and Repairing Wesleyan Chapel. Messrs. Waddington & Son, 5 Grimshawe Street, Blackburn.  
BEXLEY.—Nov. 26.—For Construction of Pipe Sewer (2,240 feet). Mr. E. Reeve Bonter, Bexley Heath.  
BISHOP AUCLAND.—Nov. 15.—For Building Institute. Mr. J. W. Taylor, Architect, 33 Westgate Road Newcastle-on-Tyne.  
BRADFORD.—Nov. 17.—For Extension of Thornbury School. Mr. E. P. Peterson, Architect, New Inn Buildings, Thornton Road, Bradford.  
CARLINGFORD.—Dec. 3.—For Execution of Works at Harbour. Mr. W. C. Browne, Carlingford.

CHESTER.—Nov. 29.—For Building Museum, Science and Art Schools. Mr. T. M. Lockwood, Architect, 80 Foregate Street, Chester.

CYMMER.—Nov. 15.—For Building Board School. Dr. Davies, Cymmer, near Maesteg.

DURBAN.—Dec. 15.—For Supply of Cast-iron Water Pipes (1,000 tons), &c. South African Mercantile Agency, 9 King William Street, E.C.

ELGIN.—Nov. 17.—For Additions to Lodge at Loch-na-Bo. Messrs. A. & W. Reid, Architects, Elgin.

ELGIN.—Nov. 18.—For Building Factory and Stable. Mr. H. J. Mackenzie, Architect, 147 High Street, Elgin.

FORDINGBRIDGE.—Nov. 17.—For Building Lodge, Coach-house and Stabling at Highfield. Mr. Fred. Bath, Architect, Salisbury, and 342 Strand, London.

GALWAY.—Nov. 22.—For Construction of Lavatories, Closets, Hot Baths, and Alterations at County Club House. Mr. Edward Townsend, C.E., Galway.

GREAT EASTERN RAILWAY.—Dec. 1.—For Works and General Repairs and Alterations for 1885. Mr. John Wilson, Engineer, Liverpool Street Station.

GREAT YARMOUTH.—Nov. 15.—For Building Two Cottages. Mr. W. B. Cockrill, Architect, Glencoe House, Gorleston.

GREETLAND.—Nov. 20.—For Building Stable and Coach-house, and for Alterations to Far Syke House. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

HACKNEY.—Nov. 27.—For Construction of Brick Sewers (20,950 feet). Sir J. Bazalgette, Engineer, Metropolitan Board of Works, Spring Gardens, S.W.

HALIFAX.—Nov. 18.—For Building Mill Construction of Reservoir. Mr. C. F. L. Horsfall, Architect, Lord Street Chambers, Halifax.

HINDLEY.—Nov. 19.—For Rebuilding Brewers' Arms Inn. Messrs. H. Walls & Son, Surveyors, 8 King Street, Wigan.

IPSWICH.—For Building Shops and Warehouses, Prince's Street. Mr. William Eade, Architect, Post Office Chambers, Ipswich.

LINDLEY.—Nov. 24.—For Building Junior Department at Oakes Schools. Mr. Ben Stocks, 7 Union Bank Yard, New Street, Huddersfield.

LIVERPOOL.—Nov. 24.—For Fittings for Sorting Office and Instrument Room; Head Post Office. Clerk of Works, Post Office, Liverpool.

LONDON.—Nov. 24.—For Ordinary Works and Repairs to Public Buildings, Hampton Court, Kew, and Richmond District, for 1885. H.M. Office of Works, 12 Whitehall Place, S.W.

NEWCASTLE-ON-TYNE.—Nov. 22.—For Building Government Offices. Clerk of Works, Post Office, Newcastle-on-Tyne.

NEWRY.—Dec. 10.—For Excavating Channel between Newry River and Carlingford Lough. Mr. J. Barton, C.E., Exchange Buildings, Dundalk.

NOTTINGHAM.—For Building Pair of Dwelling-houses, Surgery, and Stabling. Mr. Arthur Marshall, Architect, Long Row, Nottingham.

OPORTO.—Dec. 15.—For Construction of Covered Market. Senhor J. A. Correa de Barros, President of the Municipal Board of Oporto, Portugal.

REDDITCH.—Nov. 20.—For Works of Restoration at Beoley Church. Mr. Ernest Day, Architect, 5 Foregate Street, Worcester.

SELBY.—Nov. 18.—For Cast-iron Cylinders, Bore Lining, and Flange Pipes, Sinking Artesian Well, &c. Mr. T. Malinsson, Town Surveyor, Town Hall, Selby.

SPITPAT.—Dec. 8.—For Building Dwelling-house on Farm. Mr. Williams Brims, Architect, Wick.

ST. HELIERS.—Nov. 21.—For Construction of Filter Beds, Reservoir, Tank, Laying Pipes, &c., and Supplying Cast-iron Pipes, Special Castings, Columns, Rolled Iron Girders, &c., for the Jersey Waterworks Company. Mr. E. K. Burstall, C.E., 34 Pembroke Street, St. Aldates, Oxford.

STOKE NEWINGTON.—Nov. 17.—For Enlargement of Sorting Office. H. M. Office of Works, 12 Whitehall Place, S.W.

SWANSEA.—Nov. 18.—For Alterations and Additions to Brynhyfryd School. Mr. E. Sidney Hartland, Clerk to the School Board, 5 Rutland Street, Swansea.

TETTENHALL.—Nov. 17.—For Building Engine-house and Foundations at Pumping Station. Mr. Lyons Wright, Engineer, Town Hall, Wolverhampton.

VAUXHALL.—Nov. 17.—For Building Factory, Stores, Cellars, &c., Bond Street. Messrs. Hilton & Rawlings, Architects, 3 Victoria Street, S.W.

WARRINGTON.—Nov. 18.—For Building Two Intercepting Depots, &c., Supplying Cast-iron Pipes, &c. Mr. T. Longden, Borough Surveyor, Town Hall, Warrington.

WHITBY.—Nov. 15.—For Alteration to St. John's Church. Mr. Rowland, Flowergate, Whitby.

WHITEHAVEN.—Nov. 16.—For Building Offices and Workshops at Bigrigg. Messrs. Walker & Peile, C.E., Whitehaven.

WIGAN.—Nov. 19.—For Supply of Iron Pipes (500 tons) to Gasworks. Mr. J. G. Hawkins, Gas Engineer, Wigan.

### TENDERS.

#### AYR.

For Construction of first section of Tramways from Ayr to Prestwick, for the Ayr and District Tramways Company. Mr. J. MACRAE, C.E., 107 Princes Street, Edinburgh.

Stewart, Dalry	£29,679 3 6
Speight, Liverpool	9,384 7 3
A. & J. Faill, Glasgow	8,144 15 2
Kirkland, Ayr	7,699 15 9
J. & W. Osborne, Ayr	7,122 3 8
Finlay, Kinross	7,099 9 10
J. W. & G. Stratton, Edinburgh	7,076 14 5
Moffatt & Son, Paisley	7,062 4
J. & W. Granger, Elgin	7,024 18 4
A. Waddell, Edinburgh	6,984 7 6
G. & R. Cousin, Alloa	6,978 0 7
Gewans, Edinburgh	6,910 12 0

#### COVENTRY.

For Building Two Houses, Allesley Road, Coventry. Mr. WILLIAM LANGLEY, Architect, Coventry. Quantities not supplied.

Burbury, Kenilworth	£720 0 0
Waters, Coventry	700 0 0
Lea, Leamington	870 0 0
Beacham, Allesley	650 0 0
Bailey, Leamington	600 0 0
GARLICK, Coventry (accepted)	600 0 0

#### FULSTOW.

For the Erection of New Farmhouse, &c., and Engine-shed, at Fulstow, Lincolnshire, for the Trustees of Mr. Alfred Hyman Allenby. Mr. E. W. FAREBROTHER, A.R.I.B.A., Victoria Chambers, Great Grimsby.

House.	
Milns, Lincoln	£540 0 0
Parker, Binbrook	505 3 0
Clark, Louth	500 0 0
Mackarill, N. Thoresby	497 7 7
Simonson, Grimsby	492 0 0
Riggall & Hewins, Grimsby	473 16 0
Holmes, Wainfleet	425 0 0
Jessup, Grimsby	399 0 0
Mastyord, Cleethorpes	387 10 0
Snowden, Grimsby	384 10 0
JANNEY & HILL, Fulstow (accepted)	383 4 11

#### Engine-shed.

Simonson, Grimsby	190 10 0
Parker, Binbrook	188 0 0
Clark, Louth	185 0 0
Mackarill, N. Thoresby	184 0 9
Jessup, Grimsby	168 0 0
Riggall & Hewins, Grimsby	152 15 0
Holmes, Wainfleet	145 0 0
Milns, Lincoln	140 0 0
JANNEY & HILL, Fulstow (accepted)	138 18 0
Mastyord, Cleethorpes	134 10 0
Snowden, Grimsby	125 0 0



## EXETER.

For Completion of Rebuilding of St. James's Church, Exeter.	
Phillips, Exeter	£3,320 19 0
Stephens & Bastow, Bristol and London	3,130 0 0
Godwin, Exeter	3,110 6 0
Berry, Crediton	3,080 0 0
Holmes, Aliphington	3,077 0 0
Scadding, Exeter	2,859 0 0
GIBBARD, Exeter (accepted)	2,813 0 0
Gibson, Exeter	2,710 0 0

## GREAT GRIMSBY.

For Alterations and Additions to News Office for the Directors of the Grimsby News Co., Great Grimsby. Mr. E. W. FAREBROTHER, A.R.I.B.A., Architect, Grimsby.	
Simons	£405 0 0
Hollingsworth	366 0 0
WILLOWS & ROXBURGH (accepted)	307 0 0

## GREAT HARWOOD.

For Building Methodist Sunday and Day Schools, Cattle Street, Great Harwood. Messrs. MAXWELL, TUKE & HURST, Architects.	
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## Whole of the Works.

Clegg, Accrington	£1,970 0 0
Knowles, Darwen	1,880 0 0
Abbot & Son, Blackburn	1,834 0 0
Lewis & Son, Great Harwood	1,795 0 0
Whittaker, Blackburn	1,735 0 0
Keeley, Blackburn	1,726 10 0
Cronshaw, Blackburn	1,717 0 0
Walmesley, Blackburn	1,710 0 0
Noble & Sons, Rishton	1,695 0 0

## Excavating, Brick and Stone Work.

Lewis, Barrow-in-Furness	974 14 4
Greenwood, Rishton	874 0 0
Noble & Sons, Rishton	830 0 0
Foster, Clayton-le-Moors	826 0 0
Lewis & Son, Great Harwood	805 0 0
Scott & Sons, Clitheroe	765 0 0
Whittaker, Blackburn	740 0 0
KNOWLES, Darwen (accepted)	735 0 0
Walmesley, Blackburn	722 0 0

## Joiners' Work.

Knowles, Darwen	750 0 0
Hillingsworth Bros., Bradford	720 0 0
Corry & Son, Blackburn	691 10 0
Keeley, Blackburn	626 0 0
Abbot & Son, Blackburn	620 0 0
Hacking, Clayton-le-Moors	619 0 0
Turner, Accrington	580 4 0
Knowles, Rishton	558 0 0
Westwell, Darwen	549 0 0
BIRTWISTLE, Great Harwood (accepted)	549 0 0

## Plumbing and Glazing.

Ash & Newbold, Birmingham	202 10 0
Knowles, Darwen	180 0 0
Clegg, Bacup	179 0 0
Carter & Sons, Accrington	168 10 0
Squires & Son, Great Harwood	151 18 0
HARTLEY, Great Harwood (accepted)	138 17 8

## Painting and Varnishing.

Ash & Newbold, Birmingham	48 15 6
Knowles, Darwen	45 0 0
Cronshaw, Blackburn	25 0 0
Squires & Son, Great Harwood	24 11 0
HARTLEY, Great Harwood (accepted)	23 0 0
Whittaker, Blackburn	23 0 0

## Slating.

Knowles, Darwen	90 0 0
Dean	86 10 0
Bradley & Son, Gorton	83 18 0
Pickles Bros., Leeds	78 19 0
Tomlinson, Rawtenstall	77 17 0
Williams & Co., Accrington	75 16 0
THORNTON, Leeds (accepted)	71 0 0

## Plastering.

Cronshaw, Blackburn	66 0 0
Bradley & Co., Gorton, Manchester	65 10 0
Knowles, Darwen	65 0 0
Nixon, Clayton-le-Moors, Accrington	54 0 0
SHUTTLEWORTH, Burnley (accepted)	50 0 0

## GREAT YARMOUTH.

For Additions to Drapery Establishment, Market Place, Great Yarmouth, for Mr. G. B. Palmer. Messrs. BOTTLE & OLLEY, Architects.	
Springall	£1,410 0 0
Rand & Cooper	1,408 0 0
Cooper	1,352 0 0
BRAY (accepted)	1,331 0 0

## Gasfitting.

Gray & Palmer	38 0 0
BARGE & FREEMAN (accepted)	29 15 0

## GREENWICH.

For Paving Ravensbourne Street, Greenwich.	
Marshall	£790 0 0
Woodham & Fry	649 0 0
MOWLEM & Co. (accepted)	648 0 0

## LEICESTER.

For Hurdle Fencing along the Towing-path from Belgrave Lock to Abbey Park Road, Leicester, for the Corporation of Leicester. Mr. J. GORDON, M.Inst.C.E., Borough Surveyor.	
Vipan & Headley, Leicester	£611 19 0
Edlin, Leicester	593 15 0
Wright Bros.	590 12 6
Hydes & Wigfull, Sheffield	567 0 0
E. C. & J. KEAY, Birmingham (accepted)	542 12 6

For Hurdle Fencing in St. Margaret's Pasture, Leicester for the Corporation of Leicester. Mr. J. GORDON, M.Inst.C.E., Borough Surveyor.	
Cort & Paul, Leicester	£230 0 0
Edlin, Leicester	194 12 6
Wright Bros., Leicester	190 15 6
Vipan & Headley, Leicester	185 8 0
E. C. & J. Keay, Birmingham	179 18 6
Hydes & Wigfull, Sheffield	174 15 6
BURBIDGE, Leicester (accepted)	148 11 6

## LINCOLN.

For Erection of Warehouse and Out-buildings for Mr. Robert Seely, Grocer, Bailgate, Lincoln. Messrs. BELAMY & HARDY, Architects. Quantities supplied.	
Codd & Esberger	£580 0 0
Cowen & Lansdowne	465 0 0
Greenwood	450 0 0
Hampshire	439 0 0
J. & S. Binns	425 0 0
Martin & Sims	419 0 0
Harrison	408 0 0
S. & R. Horton	401 0 0
H. S. & W. Close	400 0 0
Goy	386 0 0
HARRISON (accepted)	372 0 0
Crosby & Sons	372 0 0

## LONDON.

For Alterations to The Globe, Goldsmith Row, Hackney Road, for Mr. Herbert. Mr. EDWARD BROWN, Surveyor, Hanbury Street, Spitalfields.	
Kiddle & Son	£500 0 0
Anley	496 0 0
Christoffer	489 0 0
MARR (accepted)	432 10 0

For Restoring the Coat and Badge, Chrisp Street, Poplar, for Messrs. Truman, Hanbury, Baxton & Co. Mr. EDWARD BROWN, Surveyor, Hanbury Street, Spitalfields.	
Marr	£510 0 0
D. D. & A. Brown	500 0 0
Salt	420 0 0
HAWKINGS (accepted)	392 0 0

For the Erection of New House in the Mapesbury Road, Brondesbury, for Mr. Thomas Brock, A.R.A. Mr. C. STYCHE, Architect.	
Hodgson	£3,340 0 0
Rider & Son	2,868 0 0
H. B. Oldrey	2,840 0 0
Dainton	2,795 0 0
G. & W. Watson	2,787 0 0
W. Oldrey	2,600 0 0
Harris	2,553 0 0
TAYLOR & Co. (accepted)	2,444 0 0

For Enlargement of Board School, Mantua Street, Battersea. Mr. E. R. ROBINSON, Architect.	
Oliver	£5,064 0 0
Goodman	4,747 0 0
Howell & Son	4,565 0 0
Steel Bros.	4,549 0 0
Turtle & Appleton	4,542 0 0
Smith & Sons	4,530 0 0
W. & F. Croaker	4,529 0 0
Bangs & Co.	4,451 0 0
Oldrey	4,440 0 0
Kirk & Randall	4,437 0 0
Jerrard	4,379 0 0
Wall	4,306 0 0
Holloway Bros.	4,298 0 0
Wood	4,292 0 0
Holloway	4,277 0 0
Lathey Bros.	4,270 0 0
Stimpson & Co.	4,263 0 0
Johnson	4,238 0 0

## For Covered Playgrounds to Board Schools.

Lowes	£321 0 0
Appleby Bros.	296 0 0
Wall	279 0 0
Woolams	272 10 0
Ewart & Son	268 12 0
Woolams	130 0 0
Lowes	114 10 0
Appleby Bros.	103 10 0
Newton, Chambers & Co.	200 0 0
Riley Bros.	195 0 0
Holden & Co.	189 0 0
Riley Bros.	320 0 0
Holden & Co.	270 0 0
Ewart & Son	223 0 0
Jerrard	214 0 0
Whitford & Co.	228 0 0
Woolams	227 0 0
Appleby Bros.	200 0 0

For Heating Westminster School.	
BACON & Co., London (accepted).	
For Heating Sunday Schools, Hampstead.	
BACON & Co., London (accepted).	
For Heating Congregational Church, Barking.	
BACON & Co., London (accepted).	
For Heating Castleconnell Church, Ireland.	
BACON & Co., London (accepted).	

## LONG EATON.

For Laying Out, &c., for the Long Eaton Recreation Grounds Company. Mr. J. SHELTON, Surveyor, Market Place, Long Eaton.	
Brown & Crofts, Long Eaton	£2,042 17 4
Knight, Loughborough	1,072 14 0
Barron & Son, Borrowash	1,041 10 6
Tomlinson, Derby	1,023 6 4
R. C. Cordon, Nottingham	950 0 0
Fisher, Burton-on-Trent	913 19 8
Coupe, Ripley	905 11 1
Hopkin, Nottingham	869 11 9
Todd, Derby	844 12 7
FRETtingham & Co., Nottingham (accepted)	732 8 4
W. Cordon, Burton Joyce	761 0 0
Hawley, Ilkestone	565 0 0
Surveyor's estimate	900 19 4

## LOUGHBOROUGH.

For Alteration to Main Sewer, Swan Street, including Cast-iron Work, for Loughborough Local Board. Mr. F. BAKER, C.E., Surveyor.	
Barker	£62 16 0
Needham	58 0 0
Main	43 0 0
Faulks	39 0 0

## NORTH SHIELDS.

For Building Offices for the Tynemouth Permanent Benefit Building Society, North Shields. Mr. HENRY GIBSON, Architect.	
Shotton Bros.	£396 0 0
Simpson Bros.	360 0 0
Leighton	358 10 0
Sopwith & Kent	358 5 0
Fishburn Bros.	340 10 0
FORREST (accepted)	317 0 0
All of North Shields.	

## NORWICH.

For New Public House, The Compasses, Upper King Street, Norwich. Mr. ARTHUR J. LACEY, Architect. Quantities by the Architect.	
Hurn	£1,060 10 0
Wilkin & Wilkins	1,050 0 0
Brewster	1,015 10 0
Hawes	1,000 0 0
Lacey	992 3 0
SENDALL (accepted)	947 0 0
For Mission Hall, St. Thomas Higham, Norwich. Mr. ARTHUR J. LACEY, Architect and Surveyor.	
Bennett	£1,125 0 0
Hammond	1,080 0 0
Bailey	1,037 10 0
Hurn	998 18 0
Downing & Son	998 0 0
Hawes	950 0 0
Youngs	945 0 0
Lacey	933 0 0
WILKIN & WILKINS (accepted)	920 0 0
Sendall	917 0 0
Dawes	899 9 6

## PENRHIWCEIBER.

For Building School for 200 Infants at Penrhiwceiber, for the Llanwanno School Board. Mr. MOSES CULLE, Architect.	
Protheroe & Son, Aberdare	£1,045 0 0
Julian, Pontypridd	987 0 0
Edwards, Mountain Ash	793 0 0
Harris, Mountain Ash	775 0 0
GEORGE, Neath (accepted)	679 0 0

## PORTSMOUTH.

For High Schools, Portsmouth. Second Estimate. Mr. T. O. SMITH, Architect. Quantities supplied.	
Cooper	£3,326 0 0
Burbridge	8,174 0 0
Higgs & Hill	8,048 0 0
W. R. & C. Light	7,962 0 0
Ward	7,778 0 0
Stephens & Bastow, Bristol and London	6,970 0 0
Howell & Son	6,929 0 0
Humphries	6,854 0 0
Stempson	6,633 0 0
SAMUEL STEVENS & SON (accepted)	6,422 0 0

## PORTUMNA.

For Alterations to Workhouse Buildings for Hospital, Portumna. Mr. J. F. KEMPSTER, County Surveyor.	
Pemberton & Son, Dublin	£514 0 0
Beckett & Co., Dublin	488 6 11
T. & J. Pemberton, Dublin	480 0 0
Martin, Portumna	415 0 0
Stone, Galway	398 0 0
BUCKLEY, Portumna (accepted)	343 0 0

## ST. LEONARDS-ON-SEA.

Tenders for Bridge over the South-Eastern Railway on Filsham Estate. Messrs. ELWORTHY & SON, Architects.	
Womersley, Hastings	£2,930 0 0
Cruttenden, St. Leonards	2,295 0 0
Taylor, Nutfield	2,206 13 0
Eldridge & Cruttenden, St. Leonards	2,075 0 0
White, St. Leonards	2,048 0 0
Cruttenden, St. Leonards	2,048 0 0
Eldridge & Son, Hastings	2,038 0 0
Salter, St. Leonards	2,022 0 0
Cooke & Co., Battersea	1,953 0 0
Jenkins, St. Leonards	1,950 0 0
Oliver, Brockley	1,900 0 0
White, Croydon	1,897 0 0
King, Hollington	1,750 0 0

## SWANSEA.

For Construction of Wall and Formation of road near the Workhouse, Swansea. Mr. P. ADDIS, Engineer.	
David & Richards, Swansea	£540 0 0
Isaac, Sk-tty	484 13 0
Bennett Bros., Swansea	435 10 6
Richards & Son, Swansea	387 8 4
Williams, Swansea	335 2 9
Davies, Neath	330 0 0
THOMAS, WATKINS & JENKINS, Swansea (accepted)	318 0 0

## SWINDON.

For Building Lecture Hall and Vestries, at Presbyterian Church of England, New Swindon. Mr. ORLANDO BAKER, Architect. Quantities by Mr. B. W. Pope, Bristol.	
Webb, Swindon	£1,633 0 0
Jones, Gloucester	1,050 0 0
Wiltshire, Swindon	945 0 0
Phillips, Swindon	940 0 0
BARRETT, Swindon (accepted)	906 0 0



**TEIGNMOUTH.**

For Sinking a Well for the Teignmouth Local Board.  
Mr. G. CROW, Surveyor, Teignmouth.  
Colridge, St. Thomas, Exeter . . . £860 0 0  
Hawkin & Best, Teignmouth, Devon . . . 645 0 0

**TURTON.**

For Building Public Offices, Bromley Cross, Turton. Mr. JAMES PARKINSON, Architect, Turton. Quantities by the Architect.  
McGuinness . . . £1,280 0 0  
Brooks . . . 1,250 0 0  
Burrow & Son . . . 1,191 0 0  
Martin Bros. . . 1,186 0 0  
Dougill . . . 1,110 0 0  
Hart . . . 1,080 0 0  
MARSH & MATON, Turton (accepted) . . . 1,076 0 0

**WALTHAMSTOW.**

For Making Road, Walthamstow. Messrs. W. & F. HOUGHTON, Surveyors.  
Pound . . . £497 0 0  
Bloomfield . . . 435 0 0  
Wilson . . . 410 0 0  
Bell . . . 355 0 0  
WOODHAM & FRY (accepted) . . . 324 0 0

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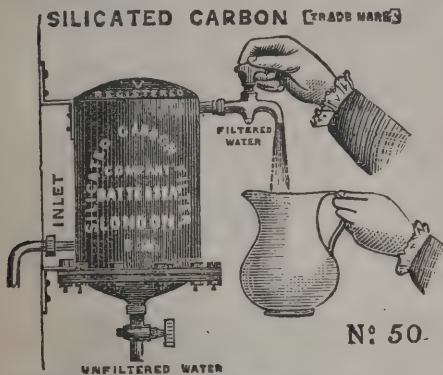
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For Building Factory, Wigston. Mr. E. L. MILES, Archi-  
tect, Leicester. Quantities by the Architect.  
Norman . . . £1,429 0 0  
Bentley . . . 1,410 0 0  
Baines & Turton . . . 1,400 0 0  
Atkins & Co. . . 1,328 17 0  
Sharpe . . . 1,327 0 0  
Cox . . . 1,327 0 0  
Ellingworth . . . 1,320 0 0  
Wright & Co. . . 1,274 15 0  
Brown . . . 1,245 0 0  
Jewsbury . . . 1,237 0 0  
Johnson . . . 1,224 0 0  
Bass . . . 1,212 18 0  
Kellett . . . 1,198 10 0  
HURST (accepted) . . . 1,189 0 0

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tect, 24 St. Paul's Square, Bedford. Quantities sup-  
plied.  
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"June 10, 1884.

"SIR,—I have much pleasure in testifying to the  
efficiency of your patent Warm-Air Fire Grate. It has  
been very successful, and given every satisfaction where I  
have used it.

"Yours, &c.

"JAMES WEIR, F.R.I.B.A.

"To Mr. Grundy."

"Baptist Chapel, Clapham Common, London. Richard  
Webb, Pastor, 10 Grafton Square.

"February 15, 1884.

"DEAR MR. GRUNDY,—I have pleasure in testifying to the  
excellency and efficiency of your patent Fire-Grate. It is  
the most charming invention for heating a large room I  
have ever known. I shall have pleasure in showing it to  
anyone who wish to have their schools or rooms pleasantly  
and efficiently heated."

From James Garry, Esq., Architect, West Hartlepool,  
July 1884.

"DEAR SIR,—I have very great pleasure in stating that  
the first stove, or patent warm-air ventilating fire grate,  
adopted by me in school at Seaton, and a second in a  
Cocoa Palace, have given such satisfaction that I now  
order eleven to be inserted in New Upper Grade Schools in  
course of erection at West Hartlepool. They are the most  
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Slater, Ashby-de-la-Zouch . . . 425 0 0  
Smith, Measham . . . 407 5 0  
Bradbury, Burton-on-Trent . . . 402 10 0  
Pike, Ashby-de-la-Zouch . . . 396 17 0  
Fish, Hartshorne . . . 386 0 0  
Slater, Gresley . . . 389 19 0  
Beard, Swadincote . . . 388 0 0  
Mellors, Burton-on-Trent . . . 369 10 0  
Holloway, Burton-on-Trent . . . 358 4 0  
Buck, Ashby-de-la-Zouch . . . 346 17 6  
ONTON, Ashby-de-la-Zouch (accepted) . . . 338 0 0

At the last monthly meeting of the Bristol School Board  
Tenders were opened for new Board schools for 800  
scholars, to be erected at Windmill Hill, Bedminster. The  
amount of Tenders was published in *The Architect* of  
last week. Messrs. J. W. Trew & Sons, of Bristol, the  
architects, estimated the cost of Plan A at £6,500. The  
quantities were taken out by Mr. W. L. Bernard, of Bristol,  
and the Sanitary Plans and Quantities prepared by J.  
Fletcher Trew, M.S.A., M.S.I., Gloucester.

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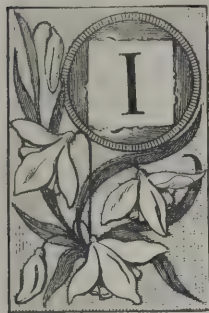
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# The Architect.

## IS ARCHITECTURE WORTH LIVING FOR?



IN the spirited discourse by Mr. J. D. SEDDING which we inserted at full length in last week's *Architect*, the question is asked in so many words—and the answer is manifestly expected to be delivered summarily in the negative—"Is architecture, as practised by the modern (English) architect, worth living for?" Mr. MALLOCK's inquiry whether life itself is worth living for everybody has heard of. This also was answered in the negative; and we all, Mr. MALLOCK included, may be said to have lived ever since under protest. That architecture, as a small and peculiar province of life easily overlooked, might be an exception to the rule, was perhaps worth considering anew; but the conclusion that it is not must be deemed satisfactory to the advanced philosophy. This result, however, could scarcely be arrived at without a good deal of explanation. Indeed, those who have not at command sufficient patience and concentration of thought may, after all, not see the joke, which we therefore beg leave to try to elucidate.

Now if Mr. SEDDING had put the proposition in an alternative form, and asked whether modern architecture is worth dying for, the answer would have been just the same; and so would the joke. To make the pleasantry even more piquant and delightful still, he might have inquired whether the Queen of the Arts, supposed to be reigning in beauty, as he intimates, at No. 9 Conduit Street, Hanover Square, is worth committing suicide for, taking, perhaps, "a cup of cold pison" after the manner of the immortal namesake of the architect of the National Gallery. The answer would have been just the same; and the joke, to the profane, might have been almost more intelligible. The matter, after all, lies in a nutshell. Does the business of an architect in these days—this is what Mr. SEDDING really means—afford to an infatuated enthusiast an adequate occasion to defy all common sense, to pass a short life and a merry one in a frenzied fever, and, in a blaze of glory, to go to the gods who love those that die young? We beg leave to echo the answer that it does not; the happy chances being a thousand to one that the most frantic of such youths is, by the beneficial influence of sheer necessity, reduced in good time to the condition of a rational being, and enabled to learn that architecture in another sense may be very well worth living for indeed, as a most useful and most agreeable occupation, highly honoured in the person of its experts, and quite satisfactorily rewarded.

Mr. SEDDING of course harks back to the Middle Ages. In those very much misunderstood times the typical architect brought to his work "trained powers, sleepless ambition, and passionate devotion." In addressing the young gentlemen of the Architectural Association upon the strength of this assertion, he invites them to ask themselves "whether they look upon architecture as a divinely inspired art that can rightly claim all the devotion of their being," or whether they are rather disposed to "take up architecture merely as an honourable profession and a gentlemanly calling?" If they are to follow the art "with the ardour of a religion," he admits the probability that they may have the misfortune "to live a life of quiet unnoticed worth," which, nevertheless, may be "happy and contented and grateful all the same." On the contrary, if they "go in for architecture as a profession which only needs the efficient handling of a T-square and ruling-pen," they may "rise to be eminent practitioners," when their reward will be great, namely, "access to the best society," the wearing of brown velveteen, a recognition of their connoisseurship in the art world, and the acquisition of certain alphabetical titles, ending with "P.R.I.B.A. if you have paid your subscription and are alive when your turn comes;" all this being on condition only that "you have a head on your shoulders" and "the faculty of turning out just what the world expects from you with promptitude."

Perhaps it is too much to ask so quick a thinker whether there may not be some *via media* to be discovered by the exercise of research and the collection of statistics. May not

an architect be enthusiastic in his art, delighting daily in the work of his pencil, eager for its successful realisation, and never sparing himself in secret study and labour lest he should leave a stone unturned under which a gem might lie—may he not be earnest in season and almost out of season, making no fuss about it—or even making a not quite unreasonable amount of fuss if human nature must have it so—and yet all the time be "rising to be an eminent practitioner" and "P.R.I.B.A. when his turn comes," having on his shoulders the solid head of a true man, and not the flighty shell of a feather-brain, and priding himself expressly upon his possession of the invaluable "faculty of turning out just what the world expects from him with promptitude?"

The expression of an airy derision for the arts and artists of our native land has long been one of the cheapest forms of a style of criticism which is almost peculiar to England. In the ordinary leader-writer of the newspapers, this intellectually contemptible and wholly vicious practice is as excusable as it anywhere can be, because he is probably a smart young limb of the law, who not only has it for his very vocation to dispense with sober facts, and, if necessary, to defy them, but is seeking a byway to bread and cheese because he has, as yet, not hit upon the highway. But when it is a member of the fraternity of artists who takes up the pitiful song, forgetful alike of national patriotism and of loyalty to his order, he must not complain if he be taken at his word, and, with such solemnity as befits the attitude of the accused rather than of the accuser, called upon to say plainly, as in the presence of his brotherhood, what it is he complains of. What answer, then, would Mr. SEDDING give to such a demand? Let him state the case soberly, quoting, if he can, in an intelligible way, chapter and verse of some sort. Looking at the highly figurative nature of his language, we may not be able to do this for him, but let us make what attempt we honestly can.

"These are critical times for us," says Mr. SEDDING. "A strange calm has come;" "a time of disillusionising alike for architects and for people," "when people are beginning to question the *raison d'être* of the architect at all." More particularly, in the Institute of British Architects, "the birds are not only fully fledged, but have feathered their nests, and, like JESHURUN, are not exactly able to soar"—whatever that may mean. Other artists, and amongst the rest the sculptors, "keep no ghosts," he adds; "but the architect's ghosts are legion—on his premises and off them—and he is not one whit ashamed." Again: "One of the noblest provinces of architecture, that of turning necessary articles of daily use into works of art, has fallen from the architect's hands;" we had thought it was rather being taken up by the architect's hand just now in many very charming ways, and with signal success. Mr. SEDDING, however, must not be misunderstood here; he is speaking of "rank and file" architects; not of some whom he would name, but for a reason that is not very clear, with "genuine admiration and respect," and who, we may venture to assert, the more they are entitled to this honour at his hands, would only the more gravely and earnestly deprecate the contempt which their admirer so indiscriminately pours upon all others, and would indeed tell him that in their opinion—speaking not only seriously but somewhat proudly now—there is more good architecture being done in England at this moment, in the aggregate of merit, than in any other country, perhaps, that the whole world contains.

Our rank and file architects, Mr. SEDDING goes on to say, may certainly claim the credit of having accomplished something in "iron joists and D-traps;" but "architecture" (is this the fine art now, or what?) "has ignominiously resigned her throne," &c., &c., "and only reserved for herself the sovereign right of levying a tax of 5 per cent. on other men's labours." Then "the engineer has robbed the architect of one-third of his domain, and the decorator and manufacturer of another third." Also "the architect of to-day need not be anything more than a paper draughtsman to sit on a stool and invent new sorts of doors and windows," "varying this occupation by occasional jobs for an engineer, who hires him to do the 'pretty' upon a bridge or railway-station." Alas, we wish he would!

Having thus effectually demolished our existing architectural world, Mr. SEDDING proceeds boldly enough to reconstruct it on another basis; but want of space prevents us from following his speculations, especially as they end in speculation after all—what little of them has not volatilised by the way, or exploded in the grim laughter which it seems to be his



principal object to create. Amongst the rest, as a closing recommendation, he would have a "technical college for architects and craftsmen," by virtue of which we should be enabled to "feel perfectly secure about the architecture of the future," seeing that "the hope of English architecture must come from the workshop and not from the architect's office." This last sentiment we have heard before; it was brought out some years ago in the *Quarterly*, and was known at that time as the doctrine of "the inspired mason." Nothing came of it then, and nothing can come of it now, except a jest. Perhaps Mr. SEDDING is only in jest from the beginning to the end of his story. We prefer to think it must be so. But even a jest may be in questionable taste, and there are many of the readers of this "lively sally" who will scarcely form so high an opinion of its author as he seems to wish. If he has given us a view of "architecture which is not worth living for," it is certainly not the architecture of English good sense, even in jest.

### CLOISTERED ARCHITECTS.

THE discussion of Mr. SEDDING's paper at the Architectural Association would suggest that more or less scepticism is arising about the claim of Mediæval and later ecclesiastics to be called architects. It is indeed difficult to believe that WILLIAM OF WYKEHAM could discharge his duties as a bishop and a chancellor, in so troubled an age as that of EDWARD III., and give attention to the details of building. The ups and downs of a courtier's life in those days were not favourable to designing, and a man whose position was so precarious that he was compelled to stoop to bribing a king's mistress for the restoration of his temporalities, and who at one time was under sentence of exile, was unlikely to have that mastership of style which is seen in the work that is associated with the Bishop of WINCHESTER's name. It is not improbable that his lordship had his little weaknesses, like many another statesman, and condescended to assume the responsibility for his assistants' productions. But the objections which may be raised in regard to WILLIAM OF WYKEHAM's architectural skill are not equally potent against all ecclesiastics. Bishops, priests, monks, lay brothers have designed buildings and superintended works in an efficient manner. They may have been exempted, however, from many of the troubles that are inseparable from contractors and workmen. This is sufficiently shown in the case of one order—the Dominicans—through the zeal of Padre MARCHESE, who has collected the records relating to art which are found in the Italian convents of the Order.

The records begin with FRA SISTO and FRA RISTORO, who are supposed to have been born about the same time, that is, between A.D. 1220 and 1225. They would in that case be older than CIMABUE. There seems to have been a sort of partnership between them. The two lay brothers were employed to complete the construction of vaults belonging to a building in Florence which had been commenced by JACOPO, and they were so successful that afterwards they were entrusted with the rebuilding of the bridge which was called the Carraja. This is not the bridge with that name which now spans the Arno. Tradition credits them with other public works in Florence. But their best example of their powers as architects is the Church of S. Maria Novella, the "Sposa Gentile," or "la sua sposa" of MICHEL ANGELO. The building must have appeared pleasing in the eyes of the Florentines, for it is there that Boccaccio supposes his immortal story-tellers to meet after the plague of 1348. The works lasted for about forty years, and during that time the superintendents were all Dominicans. It is supposed that the fame of the two architects reached Rome, and that they were summoned by the Pope to construct vaults in his palace. MARCHESE believes that they also designed the church of S. Maria sopra Minerva, in which, in spite of alterations, he traces resemblances to their Florentine building. FRA RISTORO died in Florence in 1283, and FRA SISTO in Rome in 1289. In what way they co-operated, whether one was a designer and the other a builder, is unknown. They were evidently men of ability, and CIGNARA may well be surprised at the oblivion which has surrounded them.

The success of the two monks must have attracted their brethren, by showing the advantages of architecture. A FRA MAZETTO was sent in 1300 to superintend the works at the church of St. Dominick at Prato, which is said to have been

erected at the cost of Cardinal NICCOLO, the papal legate. In the early part of the fourteenth century not only churches, but many hospices, were erected by the Dominicans in Tuscany, and it is claimed that the architects, masons, and stone-cutters were all members of the Order. One of the reforms introduced by SAVONAROLA was the union of artistic employments with devotional exercises in the monasteries. He enjoined that lay brothers should master some one art, such as sculpture, painting, architecture, construction, or illumination, and by means of their labour they could bring money to the convents. The preachers would thus be rendered independent, and consequently be able to attack abuses without any thought of the loss of support which might follow.

The monk FRANCESCO COLONNA, who was born in Venice in 1433, has a reputation as a romancist or fabulist rather than as an architect. MILIZIA will not give him credit as a writer, and alleges that COLONNA's big book cannot be read on account of its absurdities. ARIOSTO or TASSO has, he says, as much right to be called an architect. But the admirers of the friar maintain that these objections arise from MILIZIA's inability to understand the book. Indeed the title is enough to deter a reader. COLONNA's art romance is called "Hypnerotomachia di Polifilo," or "The Combat of Love in a Dream!" Allegory is so intermixed with description, it is often impossible to say what is the author's meaning. But as COLONNA was a traveller at a time when Egypt and Greece were less known than Africa is now, there may be information in his pages respecting works which no longer exist. He appears to have copied inscriptions and measured ruins, and to have tested the statements in VITRUVIUS as often as he could. D'AGINCOURT had a high opinion of the romance, which, he says, had a most beneficial effect on the age, and aided in the revival of art. It was evidently studied by artists. GIOVANNI BELLINI is said to have designed woodcuts for one of the editions, MANTEGNA was inspired by it when he painted the *Triumph of Julius Cæsar* for the theatre in Mantua, and BERNINI was under the influence of the romance when he placed the obelisk of St. Maria sopra Minerva on the back of a marble elephant, which FERRATA had carved. COLONNA's book was translated into French in 1546 by order of FRANCIS I., but it is incomprehensible to Frenchmen. ISAAC DISRAELI does not appear to have read it, as all he tells us about it is that COLONNA being afraid to put his name on the title-page, and yet wishing to assert his authorship, adopted the expedient of selecting initial letters that, combined, might form his name. The book is far from being a creditable production, especially for a monk, but its existence is evidence of the interest taken by the Dominicans in architecture. COLONNA's fellow monks could not enjoy the adventures of POLIFILO unless they had a theoretical knowledge of the art.

JOHN BUNYAN described the senses as the five gates of Mansoul; COLONNA in his dream represents them as nymphs, which are handmaids to the soul—Freewill is the queen. In the first chapter the author tells us how he wandered along a desolate shore, from whence he entered a gloomy forest. Then in his fear he prays to DIESPITER. Afterwards he is parched with a thirst, and just as he is about to drink from a stream a syren sings and he follows her. Next he sees in a valley the most wonderful architectural objects, and in describing them he introduces the precepts of VITRUVIUS and LEON ALBERTI. There is about the book all the incoherence of dreams, and in consequence every one can give their own interpretation of what is said. No one has had the courage to utilise it.

It is probable that COLONNA may have been the associate of the more renowned FRA GIOCONDO, of Verona. This monk was one of the greatest of the Dominican artists. He began his career by preparing an account of the Roman remains, which was presented to LORENZO DE MEDICI. Entering into the service of the Emperor MAXIMILIAN, he was employed on the repairs of the bridge at Verona. FRA GIOCONDO adopted the expedient of strengthening the piers by driving a double row of piles around them. His experience in construction was turned to account in editing books, and he produced a sketch of CÆSAR's bridge over the Rhone, and corrected many errors in the copies of VITRUVIUS. LOUIS XII. invited him to France. In Paris he constructed two bridges; one was a bridge near the cathedral of Notre Dame, which SCAMOZZI considered to be the best-constructed work in the city. While in Paris he discovered a manuscript of PLINY's letters. It was printed by MANUTIUS, and the descriptions of the Tuscan and Laurentine villas belonging to the consul have



been from that day the subjects of much controversy. FRA GIOCONDO held the position of "Royal Architect" according to one account, while in another he is described as "Reconstructor of Edifices in Stone." His success excited jealousy, and, in consequence, he accepted an invitation sent by the Venetians, who were then suffering much inconvenience from the filling-up of the lagoons by the Brenta. Many plans were proposed, but one by GIOCONDO was adopted, after a great amount of opposition. In the course of a few years the friar (who meantime had left the Dominicans for the Franciscans) is found defending Trevigi against the league in which half of Europe was joined. He anticipated TODLEBEN at Sevastopol by constructing his defence works of clay, and the strength of the fortifications astonished CHARLES V. But no sooner was the work completed than he returned to his architectural studies, and in 1511 produced an edition of VITRUVIUS, on which he had been engaged in his intervals of leisure for several years. The destruction of the Rialto by fire brought him once more to Venice. But his design was considered too magnificent and expensive, and one by SCARPAGNINO was preferred. The old friar indignantly abandoned Venice and turned his steps to Rome, in the hope that he might end his days there in peace. Soon after his arrival BRAMANTE died, and RAPHAEL was appointed his successor in superintending the works at St. Peter's. But the shrewd Pope knew that the painter was without experience in building, and accordingly FRA GIOCONDO was asked to give RAPHAEL the aid of his long experience. "The Pope," RAPHAEL informed his uncle, "has given me as my companion, a most learned friar: he is very old, and has passed his eightieth year. The Pope, knowing that he cannot live long, appointed him to be my colleague, for he is a man of great reputation, and exceedingly wise. I shall learn of him any fine secret that he may possess regarding architecture, and I hope thus to become perfect in this art." FRA GIOCONDO was engaged on the works at St. Peter's during four years, receiving twenty-five ducats a month for stipend. According to some authorities he was the architect of the fine hall at Verona, and when nearly ninety years of age he returned to the city, and may have died there. FRA GIOCONDO was a type of those wandering scholars, soldiers and artists of whom one so often reads in the early days of the Renaissance. A citizen of the world, he was ready to give his skill to any employer. But on reading his biography, it is difficult to understand how, amidst so precarious a life, he was able to produce editions of Classic authors, copy inscriptions, and combine hydraulic and military engineering with architecture. Among the many-sided men of that age he holds a prominent place.

It is noteworthy that the architects who belonged to the religious orders were restricted apparently to certain classes of work. They built churches, but as many of the men who were employed under them were likely to have been lay brothers, or members of religious confraternities, the anxiety of the superintendents was lightened. The principle of a fair day's wages for a fair day's work was not acted on, and there is enough to show that the humblest labourers were sometimes in a state of enthusiasm, while toiling like beasts of burden. Then again, in the public works the ordinary laws of political economy were set aside. The friars were, therefore, in favourable positions for the display of their talents. It is remarkable that we rarely hear of them as architects for private buildings. The great lords may have called in a Dominican to plan a work of drainage, or fortification, or tunnelling, or bridge building, knowing that the expenses were to fall on his subjects and tenants. But it was different when he contemplated the erection of a castle for himself. Secular advice was then considered the most efficacious and economical. While, therefore, the ability of the men who prepared their designs in quiet monasteries in France, Germany, and Italy must be admitted, it does not follow that they would have been equally successful if they had been hampered by the conditions which surround everyday work in this world.

**A Catholic Church**, which was erected from designs by Messrs. Pugin & Pugin, has been opened at Airdrie, N.B. It consists of nave, aisles, chancel, and baptistery, and a tower, which is to be surmounted by a tapering spire. The total length of the church is 112 feet, and the nave and aisles 50 feet. The height from the ground to the ridge of the roof is 47 feet. The style of architecture is Early Decorated. Carlin stone has been used throughout, with polished dressings and rock-faced facings. The builder was Mr. John Denton, of Glasgow.

## ROYAL SCOTTISH ACADEMY.

THE annual meeting of the Royal Scottish Academy was held on the 12th inst. The following members were elected office-bearers for the ensuing year:—Council—Sir William Fettes Douglas, president and trustee; Messrs. W. D. M'Kay, J. Dick-Peddie, J. B. M'Donald, W. Beattie Brown, John Smart, and W. E. Lockhart; secretary and trustee, Mr. George Hay; treasurer and trustee, Mr. J. M. Barclay; trustee, Mr. William M'Taggart; auditors, Messrs. Gourlay Steell and W. E. Lockhart; librarian, Mr. John Hutcheson; curators of library, Messrs. W. D. M'Kay and J. Dick-Peddie; visitors of the Life Academy, Messrs. J. M. Barclay, W. E. Lockhart, Robert Gibb, and Otto T. Leyde.

The annual report by the Council, which was submitted to the meeting, stated that the attendance of visitors at the exhibition last spring was considerably above the average. At the annual general meeting, held on November 14, 1883, Thomas Stuart Burnett, sculptor, Patrick William Adam, and George Whitton Johnstone were elected to the rank of Associate, to fill the vacancies caused by the election of W. D. M'Kay to the rank of Academician, the death of Mungo Burton, and the resignation of R. Rowand Anderson. At a special general meeting, held on November 26, J. W. Oakes, A.R.A., and Thomas Graham were elected to the rank of honorary members of the Academy. At the statutory meeting, held on February 10, William Beattie Brown was elected to the rank of Academician, to fill the vacancy caused by the death of Robert Gavin. At the statutory meeting in February next, the Academy will be called upon to elect an Academician in place of the late Arthur Perigal. The librarian and curators of the library report that there has been an increase in the attendance of members in the library during the past session. The librarian has completed the classification and arrangement of the large collection of drawings bequeathed to the Academy by the late David Laing, H.R.S.A., LL.D. The collection is arranged in sixteen volumes folio, and contains sixteen hundred and sixty-one drawings. The librarian has also compiled an index to the contents of each volume. The visitors of the Life School report that the session of 1883-4 commenced on November 15, 1883—being fully a week later than usual, owing to a new stove being fitted up in the class-room—and ended on June 27, 1884, including 116 morning and 116 evening meetings. The aggregate evening attendance was 2,040, or an average of 17 per night; and 1,729 was the aggregate morning attendance, being an average of 15 per morning. The visitors testify to the diligence and progress of the students generally, and to their gentlemanly and decorous conduct. The Council are glad to observe the generally high quality of the work done in the Life School, and are specially gratified with the progress of several of the younger students. It is with much pleasure also that they express their approbation of several of the works sent this year in competition for the Stuart Prize. In design and composition they are much superior to those submitted in recent years; and the earnest effort evinced in the study of these important qualities deserves warm commendation. The works of the students in this year's exhibition having been previously examined in order to decide the Keith Prize, the studies and competition designs were also carefully scrutinised, and the prizes awarded as follows:—

For painting from the life (the Chalmers prize)—C. A. Sellar and J. Bowie, equal. For the best drawing from the life—J. Allison. For the second best—J. K. Ferguson and G. Denholm Armour, equal. Keith prize, for the best work of a student in this year's Exhibition—T. Scott and G. Denholm Armour, equal. MacLaine Watters medal—C. A. Sellar. Stuart prize—T. Scott and C. Mackie, equal.

Several studies from the life executed in water-colour by T. Scott, also basso-relievos from the life, executed respectively by J. S. Rhind and W. Martin, deserve honourable mention. The following among other additions have been made to the Academy's collection of works of art, &c., during the past year:—

*Coire-na-Faircamh*, diploma work of William Beattie Brown, R.S.A.; *Portrait of Professor John Stuart Blackie*, H.R.S.A., by James Archer, R.S.A., presented by Mr. Archer; 161 proofs of engravings, by William Forrest, H.R.S.A., engraver, presented by Mr. Forrest.

A special general meeting of the Academy was held on November 26, 1883, for the purpose of considering whether West Princes' Street Gardens was a proper site for the proposed Forestry Exhibition. The members unanimously condemned the proposal, and resolved to memorialise the Town Council on the subject. This, however, was rendered unnecessary, it being found that buildings could not legally be erected in the gardens. The threatened outrage was thus happily averted. The Academy, at a meeting held on April 10, resolved to address a letter of condolence and sympathy to the Queen on the lamented death of His Royal Highness Prince Leopold, Duke of Albany. At meetings held on March 19 and June 24, memorials were addressed respectively to the Prime Minister and the House of Commons in favour of the proposed restoration of the Castle Hall, and of the "Access to Mountains (Scotland) Bill." The



Academy, in recognition of the tercentenary of the Edinburgh University, during the celebration of its festival held in honour of the occasion, had the pleasure of giving, on April 18, an afternoon reception in the galleries of the Academy, en suite with those of the National Gallery. A very numerous company was present, including the distinguished delegates and guests of the University. The University having invited the Academy to send a delegate to their tercentenary celebration, the Academy unanimously appointed their President to represent them on that occasion, when the honorary degree of LL.D. was conferred on him. With much regret the Council report the loss sustained by the Academy in the sudden death of their esteemed treasurer, Arthur Perigal, one of the oldest members of the Academy. He was elected an Associate in 1841, and attained the rank of Academician in 1868. A minute was unanimously adopted at a meeting of Council, held on June 14, briefly recording the facts of Mr. Perigal's career, and expressing the esteem in which he was held by all his professional brethren. At a special general meeting of the Academy held on June 14, convened in accordance with the laws, to fill the vacancy in the treasurer'ship, J. M. Barclay was elected to the office.

### GLASGOW ARCHITECTURAL SOCIETY.

THE opening meeting of the architectural section of the Philosophical Society of Glasgow was held on Monday in the Institution Rooms, Bath Street. Mr. James Sellars, the president of the section, took the chair.

The President delivered his opening address. Beginning by a reference to the recent discussions on the subject of the dwellings of the poor, he expressed the opinion that the model houses which have been erected in London and elsewhere were neither suitable for, nor indeed intended for, the very poor. The rents were necessarily beyond their means, and it would be precisely the same in Glasgow, or any large city, where ground is valuable. Is it coming to a time, he asked, when State or municipal aid will have to be given to enable the kind of houses required to be built? I think it is. I do not see any reason, except the financial one, why large groups of buildings, which I will call barracks, for want of a better name, should not be erected in certain districts in which the houses would be built of the most indestructible materials—for that is essential—and arranged on the best sanitary principles, with suitable baths and washhouses attached to each group, and which would be under constant supervision and inspection in order to compel attention to sanitary rules. This would come very near what has hitherto been considered an impossibility—namely, compelling people to be clean by Act of Parliament, and it is not unlikely to be considered revolutionary—an outrage on the rights and privileges of a free people. But virulent diseases require strong remedial measures, and after all it would only differ in degree from what our authorities do at present. They restrict, and very properly so, the number of persons who may occupy small houses, and in a variety of ways regulate and inspect the arrangements of dwelling-houses and their adjuncts, and the idea which I have ventured to bring before you is only carrying the principle already acted upon a little further. As regards the financial aspect of the question, I have already indicated that I do not think houses of the kind required could be built in Glasgow to pay, and some money sacrifice would have to be made in the first instance.

Turning now to other questions of interest to us here—questions, however, more local in character than the one just referred to—I will first ask your attention to the subjects recently brought prominently before the public by Lord Dean of Guild M'Ewen, viz.:—The condition of house drainage in the city, and the question of exits from public buildings. His lordship pointed out that many of our public buildings are in a very unsatisfactory condition in respect of exits, and his opinion has only too soon received a fearful verification in the appalling catastrophe at the Star Theatre two weeks ago. In considering the powers of the authorities in connection with these and other subjects to which I may refer to-night, I will briefly consider the powers—that is, as I interpret them—vested in the authorities under the present Police Act, those sought to be obtained by the proposed new Police Act, and those provided in the Burgh Police and Health (Scotland) Bill. In regard to this question of exits from public buildings, the powers at present possessed by the authorities appear to be very limited; and the clause in the proposed Glasgow Police Act was almost identical with that in the existing Act. The General Police Bill contains a clause of similar import, but with this very important addition, that the means of ingress and exit shall be approved by the Commissioners from time to time as they may deem necessary, and further, existing buildings used, or proposed to be used, as a place of public entertainment, or for holding large numbers of persons for any purpose whatever, shall be inspected, and, if found unsatisfactory, then they must be altered to the satisfaction of the Commissioners. These latter provisions are better than we have at present in Glasgow, or proposed to be had, in respect that they provide, not only for the accesses and exits being sufficient and properly planned to begin with, but also for inspection and supervision after they are in use. Theatres in

Glasgow have to be licensed year by year, and the means of exit, &c., are annually inspected; but that does not, I think, apply to music-halls or other halls, although it is hardly less necessary in the one case than in the other. I do not think that the clause in the latter Bill goes far enough. There are certain things which may be ascertained and fixed, such as the proper width of doors—and that should certainly be done. Mr. White, our able assistant master of works, gives it as his opinion that every public building should have the doors of such width that there would be one foot of exit space for every seventy persons the building can accommodate. Further, the widths and kind of stairs, if any, should be fixed and described—the stairs of no less width than the doors, and having no square corners on the landings. The gradient of the stair might also be fixed at not steeper than, say, 1 in 2, and that separate egress direct to the street should be provided for each floor or gallery in the buildings wherever possible; or, at least, and this ought to be imperative, in no case should it be possible for two streams of people to cross each other's path in a stair or passage, and where a stair was used for several floors, it should be increased in width at each flow in proportion to the additional number of persons who used it from that point. Consideration should also be given to the position of the doors in a hall; if they can only be at one end of the hall they should be wider than the same number of doors distributed over the hall. In connection with stairs, I would suggest that if it is necessary, as I believe it is, to put gates or movable barriers across them, and the same applies to passages, for the regulation of crowds entering a building, then it would be very desirable that there should be separate stairs for exit only; or a person appointed by the authorities to see that these gates or barriers were opened or removed immediately after the entertainment began; and it might be the duty of the same official, or officials, to see that all the exit doors were opened for use at the end of the entertainment, and so fastened during the entertainment as to be ready to open outwards under the slightest pressure. So far as I know the Glasgow authorities have no power to interfere with internal alterations of buildings, except in the case of dwelling-houses, after they are in use, therefore they may approve of plans of public buildings showing perfect arrangements of stairs and passages and ample exits, but which stairs and passages are in practice so mismanaged and obstructed by gates or barriers not shown on the plan, and which exit doors are never open, or openable, when the need comes, that the best skill and experience they can bring to bear on the matter is futile without the power to see that the wide passages are not reduced in width by barriers or gates, and that the exit doors provided by the plan and made in the building are used. Every exit door in any hall should be opened on all occasions when the hall is in use, but simply to make sure that they are always openable, that their hinges and appliances are kept in working order, so that when the crisis comes, as it may come any day, they will not be found rusted or jammed up from misuse. I have no doubt all such matters will now get due attention from the authorities, and that recent experiences here and elsewhere will lead them to obtain the necessary legal powers, if they have not got them already, to compel the owners of theatres or halls not only to provide satisfactory arrangements, to begin with, but to keep them in working order, so as to secure, in the highest degree, the safety of the public in all possible circumstances.

As regards the other, and certainly not less important, question dealt with by the Lord Dean of Guild, viz., the drainage of dwelling-houses, something has already been done towards their general improvement, though not by Act of Parliament. The drain-testing carried out by the sanitary department and the Glasgow Sanitary Protection Association (the operations of the former being of course confined within the municipal boundaries, and the work of the latter being within and without the city) revealed a condition of things which is nothing less than appalling. Out of hundreds of house-drainage systems examined a very trifling proportion, less than 5 per cent., I think, were pronounced entirely satisfactory. It does not of course follow that the other 95 per cent., assuming that to be the proportion, were necessarily dangerous to health, because the imperfections in many cases might be slight and unimportant, and the test applied is a very severe one, the smoke being driven through the pipe under considerable pressure. Yet I have no doubt that it is a fair statement to make, that at least 50 per cent. of all the houses examined were in a condition as to drainage prejudicial to health. Now, when you consider that as far as the work of the Sanitary Association is concerned, at least, the tests were applied to houses of the better class, generally erected under some kind of supervision, it is a fair conclusion to assume that thousands of the common blocks of tenements—very frequently erected without any kind of supervision—must be in a much worse condition. It is not to be forgotten, of course, that many of the houses inspected were old houses, some of them erected before drain pipes were invented, for that is not so very long ago. Indeed, I am informed that some of the stately terraces in the West End, commanding magnificent views of the valleys of the Clyde and the Kelvin, had only the old-fashioned built drains when they were first erected, and it must be within the knowledge of many present, as it is within my own very



recent experience, that that very unsatisfactory and antiquated form of drain still exists in otherwise excellent houses in first-rate localities. Any sort of test applied to drains of that kind, however well made at first, but left to take care of themselves since the time they were laid, could not have any other than an unsatisfactory result. The very best and most scientifically-arranged systems of drainage will not last for ever under the most favourable conditions possible, and therefore they ought to be periodically tested. Thirty or forty years ago, when built drains were common, to get rid of the nastiness in any way was the principle acted on. No drain at all is better than that condition of things, and yet I do not know that it is altogether obsolete even in Glasgow, and certainly not in some of the smaller burghs and populous places—even some of the fashionable health resorts on the Clyde.

Let us now see how far our authorities have gone to prevent such a state of matters being continued in the erection of new houses, and how they can interfere with it in existing buildings. In the Police Act there does not appear to be any clause—apart from that relating to public sewers—dealing with house drainage; that is, that the connection with the main drain in the street is to be properly made. There the control seems to end. In the proposed new Act, however, very ample provisions are made, and the same may be said of the new Burgh Police and Health (Scotland) Bill. Having quoted the provisions in the two Bills, Mr. Sellars continued—On the whole, however, I think that the clauses in the new Glasgow Act in regard to drainage of new houses are better for Glasgow than those in the Burgh Police and Health (Scotland) Bill, and especially so that they are more definite in describing the manner in which drains are to be laid and ventilated, and less is left to the opinions of the Commissioners or Dean of Guild Court, for the time being. Mr. Sellars went on to notice several other points in these bills. In the first place, the manner in which the question of the height of buildings, in relation to width of streets and free spaces behind buildings, is treated. The difference appears to him to be in favour of the provisions in the Glasgow Police Bill. Not only did the latter provide wider spaces, but it also provided for the discontinuance of the arrangement of blocks of houses known as hollow squares, by having an opening in the end, or cross blocks of building, to permit a free passage of air through the space between the backs of the houses. Another objection to the Lord Advocate's Bill was that it had no provision regulating the height of buildings. He further discussed the several Acts in regard to their provisions for protection from fire, and for the preservation of the health of the community, and, in summing up, said he was of opinion that Glasgow, with its well organised and capable sanitary department and office of works, would be better under the provisions of its proposed new Police Act than it would be under the Burgh Police and Health (Scotland) Bill, and that the latter, admirable as it is in most respects, failed in not providing for the proper administration of its provisions as to building regulations and drainage of houses, &c.

On the motion of Mr. David Thomson, seconded by Mr. James Howat, a vote of thanks was passed to Mr. Sellars.

### MR. RUSKIN'S LECTURES.

THE subject of the fifth lecture of Mr. Ruskin's Slade course for this year was "Protestantism: the Pleasures of Truth." The professor said that the space of history in Christendom of which the temper was represented by the changes in architecture and in all other art, and which he proposed to illustrate in that day's lecture, was not definable by the reigns of kings, because it took place in different parts of Scotland, Ireland, and the Continent, especially Germany, at different times. He could therefore only define it by its character, calling it the period of Protestantism—that was to say, the bearing witness for spiritual truth against manifest falsehood, or the bearing witness against such falsehood in the interests of justice. There were two protests which were absolutely distant, and merely by chance coincident. The first protest for the principle of religion was in all countries that properly termed the Reformation; the second protest—that for the right of the subject—was properly called and known in all countries as the Revolution. The Reformation meant, in the summary, John Knox; they could thus always concentrate the regular policy of the mob movement into one man, who was its head—Luther if they liked, but he liked Knox better. John Knox was the Reformation; John Hampden was the Revolution. The one said, "I won't be cheated in my religion;" the other said, "I won't be taxed in my pocket." It, indeed, happened continually that the Protestant was fighting at once against lies and taxation. All the beauty of Protestantism they would find embodied by these two great masters, Scott, for English, and Goethe in Continental literature. He read further from the chapter on "Divine Right" in "St. Mark's Rest," and coming to a description of Venetian maritime enterprise, he stopped, and, referring to our own Navy, said we spent about a hundred times more now than we used to spend, upon what he called iron bubbles, which only burst. He had a cousin who went down in the *London*. There was nothing the matter with it, except that it was made of

iron instead of wood by those donkeys who governed such matters. It was not the scarcity of wood which led to the building of iron-clads—not at all; it was the competition of ironmongers, who got the poor Government—the Government was honest enough, but the goosefied Government was hunted down by these ironmongers, and had simply purchased those pretty toys of ironclads that the ironmongers might have something to do. What had taken place? They simply went upside down, and there was nothing so costly in all naval expenditure as the loss of the *London*. And what was the reason! Because it was built of iron. A gale was nothing at all to a wooden ship—Venice would have laughed at it, rejoiced in it. They never heard of a Venetian being upset or making for the shore. Why? Because they had been broken in to the life of the rough sea. But with the *London*, she was crossing the Bay of Biscay when it got a little rough; the wind blew the bulwarks down, and down the ship went bodily. The only grand thing connected with it was that the captain, looking over the bulwarks as the last boat was launched, gave the crew their latitude and said he would go down with his ship, and he did. Contrast this with our present-day seamanship. We thought it something in war, did we? It was some bombastic blarney—Irish—no, English blarney, because there was always some wit at the bottom of Irish blarney; but English blarney was nothing but a double blunder. Why, what did they do? They went to fight in the Baltic; they knocked their head against Cronstadt and came back again. Cronstadt cared as much for them as for a straw. They next went to Sebastopol; they hurt their head there, but it was glossed over by lies in the papers. Of course they all knew well enough in their hearts that the British fleet got considerably well licked. Why lately they had been very nearly caught by a few Arabs, and the whole thing that did them credit was the gallant action of young Cochrane, who did more than the whole fleet did. They might say all that was irrelevant, but they did not know of a finer art than shipbuilding, and they would find that out when he set them to draw ships; they were only drawing shells now. Even a draughtsman could not draw two sides of a ship alike; nobody but Turner ever did. They might say one of the subjects forbidden to him was political economy; but they would find it would be forced on them all pretty soon. When all the present ships were destroyed (the Government would ask for a loan pretty soon), the new ones would also all go to snap in a very short time. Mr. Ruskin concluded his lecture by reading a passage from Scott's "Lady of the Lake," and observed that he found scarcely anybody had any poems or novels of Scott. Therefore, he was going to send them forth by the gross among the schools of England—not as prizes, but for governesses to give to good girls. He would recommend that the pupils should draw lots for the volumes. The governess might say, "Here is a pretty book; I do not know who shall have it, so it shall be drawn by lots." The girl who then got it should choose to whom she should give it away to. That would serve the purposes of a very subtle little moral lecture. The subject of the next lecture will be "Atheism: the Pleasures of Sense."

### THE LAYING-OUT OF FEUING GROUNDS AND THE PLANNING OF HOUSES.\*

BY JAMES GOWANS, ARCHITECT.

BEFORE laying-out new ground the adjoining proprietors should be consulted so that the line of streets and approaches work into each other. If conterminous lands are laid out without considering the relation one bears to the other, the result may be that through-and-through accesses may afterwards be unobtainable, or the route made so circuitous as to be a great impediment to the general traffic of the city. Instances—want of access from Greenhill Gardens to Whitehouse Loan; Lauriston Gardens to the Meadows; West Fountainbridge to Dalry; and Dalry to Coltbridge district. Besides the public inconvenience thus brought about, the drainage is often necessarily imperfect, arising from a want of comprehensiveness in at first dealing with the subject in reference to the particular grounds which each individual proprietor may possess, as a whole.

If old trees are on the ground they should be preserved by making the plan, as far as practicable, subservient to them, and the streets should be wide enough to admit of trees being planted along the footpaths. Besides the charm of a shady walk in summer and the effect they have in softening and clothing the hard line of our streets, trees are known to possess health-giving properties, in a very high degree; and nothing would tend more to the embellishment of our streets than rows of well-grown and well-preserved trees.

In my experience of planting trees in the city, I find that elms thrive best. Those in Castle Terrace were transplanted from the embankments of the Edinburgh and Glasgow Railway, where they had grown for about thirty years. Few of them failed to grow, the

\* A paper read at a meeting of the Edinburgh Architectural Association on November 17, 1884.



failures being occasioned more by thoughtless boys from the adjoining schools breaking down the branches and peeling off the bark, and so wounding them past recovery. Trees, to thrive in a town, as in other situations, require suitable soil to nourish them, free from the poisoning influences of gas, with which the ordinary soil is often saturated. If fresh earth is supplied and care taken of the roots in transplanting, trees will grow vigorously in any of the streets of our city which are wide enough to receive them.

To give plenty of open space both back and front, more especially to continuous houses, tenements of houses should be placed so as to admit sunlight and a free current of air. In the suburbs, where each villa has its quarter or half acre or more, there is no want of open ground. I plead for ground that is being built over by tenements so high and so close to each other that sunlight cannot penetrate to dispel the damp atmosphere that thereby exists all the year round. The architects who laid out the New Town sixty years ago had more enlightened ideas of what was valuable in this respect than we have at the present day, and unless the authorities get some power of control, or secure in time open spaces, there will be another City Improvement Scheme needed to pull down the houses now being erected so densely all round this city. In laying out some ground of my own, I am keeping spaces open at the angles, having continuous houses in the centre with villas at the corners. This arrangement allows a free current, and prevents the erection of corner tenements which cannot be planned so as to admit of the necessary light and air.

The drainage should be well considered, and the line and level accurately laid down, and afterwards adhered to. Where it can be got, the sewage should be at the back of the houses, with a separate drain for the roof water in front. If the houses are well planned, with the closets, &c., at the back, this prevents the drains passing under the building, which are so highly objectionable. If the drainage can only be placed in the street, then there should be two pipes, one on each side, close to the footpath; and this applies to all piping, such as water, gas, telegraph, telephone wires, &c. This is the right thing to do, on the score of economy; smaller drain-pipes will answer, and the crossing and recrossing of streets would be obviated, besides avoiding the cost and annoyance of having the centre of the streets opened up, and the paving destroyed, wherever junctions or repairs have to be done.

The drains should be well ventilated, having plenty of openings to let the air in and out. The more you disseminate the dangerous gases of close drains by inlets and outlets, the less risk there is of disease being propagated. To have our main sewers sealed up as they are, seems to me to fly in the face of all sanitary knowledge. With drains well ventilated and proper flushing apparatus, the pressure that now exists upon the subsidiary piping of houses, especially those at high levels, would be relieved, and the danger dispelled. What I further desire to see would be ventilating shafts at frequent intervals, carried to a high level, where the living germs of disease would be destroyed, without risk to the people, and with self-acting flushing apparatus, placed on the drains so that a full volume of water would wash them out, and free them from all impurities or gases, which in their escape into our dwellings lead to ill-health and death itself. And now that we have abundance of water, these flushing tanks should be attached to the main sewers, and not depend on the occasional flushing that rain brings about, which cannot be so complete as the full flow from the flushing apparatus.

Before leaving the consideration of feuing ground, I would notice the danger of building on soil that has been saturated with drainage, such as the irrigated meadows and ground alongside of open sewers, like those at Powburn, Broughton, and Dalry, which have already been partly built over, or are fast coming within the range of feuing purposes. The same remark applies to ground that has been made up with rubbish of an offensive kind. To erect buildings on such a stratum is greatly to be condemned, as the heated air of houses so placed draws up from the soil an atmosphere which may be charged with the deadliest elements.

#### *Planning of Houses.*

A house, to be well planned, should be useful and convenient for carrying out domestic arrangements in the simplest and easiest way. The necessity of the architect making this his first consideration is very obvious. A thing to be of the highest value must be useful, and nothing more so than the houses we live in. A house should be arranged so as to suit or even improve the habits of the people who live in it. It should also be a healthy house, otherwise it sadly fails in that which a habitation ought to be. In the matter of convenience and completeness, it should be self-contained, both in and out. This should be striven for in designing houses of all classes, but especially those of the lower. To have one room entering from another is bad planning, and should be avoided; in cases of sickness or privacy it is very objectionable.

If a house is contrived, to begin with, so that it is deficient in that which provides for ample light, ample ventilation, and good drainage, it gradually becomes a diseased house, which nothing will cure, and I cannot impress too strongly the need of designing houses which will prevent as far as possible that share in the death-rate of our city which unhealthy houses lead to. There can

be no doubt that a house that has been subjected to the escape of bad air, the soaking of the basement by leaking drains passing under the building, has the living germs of disease about it, and I cannot state this view too forcibly, as in my opinion there are many such houses in our city, which throws a heavy responsibility on those who had to do with their imperfection in this respect. Drawings of drainage, showing accurate line, as well as the course of bends and level, should be as carefully done as any detail of the building.

Besides having the rooms self-contained, the staircase or lobbies should be wide, airy, and well-lighted. They are the lungs of the house or building. A narrow, dark, badly-ventilated staircase is fruitful of disease, and so is the lobby. At the present moment I see tenements of houses being erected which are sadly defective in this way; by whom planned I know not, but they or the authorities who permit their erection have much to answer for. It is difficult to understand how the authorities can allow tenements of houses to be erected having narrow dark staircases, water-closets in the centre of the building, lighted from the staircases, and with attempted ventilation by a pipe to the roof, which is more likely to supply air to the heated house than draw the vitiated air from it, besides the danger of allowing the air of one house to pass into another, and so propagate disease if such should exist in the building.

Healthy and unhealthy houses, individually or in groups and districts, are perfectly well known to medical men, and it is matter for consideration whether these should not in some unmistakable way be specially distinguished. The effect of this would probably be to bring those who own such houses to see it to be their interest to make them properly habitable.

In the selection of houses a cheap rent is often a great inducement, even to those who can afford to pay on a higher scale; but if this is done to the neglect of sanitary arrangements it becomes foolish economy, as much more may have to be paid for doctors' bills than would have to be expended for better accommodation, apart from the suffering from ill health and its consequences.

In the choosing of houses we are not so concerned for those who have the means, and ought to have the knowledge, to enable them to select a healthy residence. The class we are sorry for are those who from limited means or circumstances cannot pick and choose, but must take what is offered to them, whether healthy or no; and I would point to the need of all proprietors having their houses certified as to their healthiness. If the Legislature provide for the safety of sailors in seaworthy ships and the protection of miners in dangerous mines, action in the direction I have indicated is not less but even more urgently needed.

A newly-built house which has everything clean and inviting to a tenant, may, from some latent defect in the drainage or otherwise, have concealed within it the most deadly element of disease, which a very simple test would bring to light. This being so, why should tenants not demand from proprietors a certificate that all is right in a sanitary sense, before occupation?

The next thing I would press for in designing a healthy house—after providing for separate entrances to each apartment, and plenty of light and air—is to arrange the plan so that those places connected with the sanitary portions of the house are so situated that the drains need never pass under the building at all. The system of passing sewage-drains through and under the building is bad planning, and is one of the greatest sources of disease that I know of. It is a mere question of planning to have closets and sculleries on the back wall of the house, free to be lighted and ventilated direct from the open air, and when this is done drains need not go into the building at all, as pipes are better outside than in. A great danger of passing the pipes inside is that the settlement that the walls of all newly-erected buildings have is apt to dislocate the jointing of the pipes, and so allow the drainage gases to find their way into the house.

I would have all closets clear of the house, with a well-lighted passage, however short, which would allow of a clear through-and-through ventilation between the closet and the main building; and further, I would have these places roomy and well-lighted. To this day some architects adhere to the system of narrow, ill-lighted places, such as existed thirty or forty years ago, when closets were first introduced, and when there was a tax upon light, which was evaded by bringing the daylight of windows under the medium size.

I need hardly say that no closet is perfect unless the piping is well ventilated, and this not by a pipe of smaller size than the soil pipe to which it is attached. Closets should have a cistern distinct from that which supplies the domestic uses, as there is an instant when in using a closet the foul air finds its way up and into the water of the cistern above.

While speaking of cisterns, there should be a place for these which should be lighted and easily accessible for cleaning periodically. The overflow pipes of cisterns, wash-hand basins, baths, washing-tubs, and sinks should all discharge into the open air, and not be connected directly with the sewerage drain. The danger of having these discharging into the drains without the interception of the atmosphere is very apparent, and cesspools cannot be depended upon, as, owing to only occasional use, or leaving the



house unoccupied for a time, the water in the dip dries up, when a free course is given for the inlet of sewage gas to pollute the dwelling.

Before leaving the interior of the house I wish to notice the value and comfort of a vent that has a good draught, and the care that is needed to secure this. In my experience, the throat or oncome at the level of the lintel of the fireplace is often carelessly formed, and allows dead air to accumulate, and so prevents the upward draught; and also, the course of the vent is not carefully defined by plan, so that the builder may line it, as he builds, to a definite point; and again, the chimney head should have thickness and height to prevent the choking of the upward current by the damp air after it passes the roof. Chimney heads should be treated so as to form a feature in the architectural character of the building, and not be got rid of at the earliest possible point of the structure, necessitating afterwards those ugly contrivances which tend to disfigure the sky-line of our principal streets and buildings. From where I write, the beautiful landscape is sadly disfigured by the unshapely ends and backs of houses within sight, and the ungainly chimney heads and disfigurements by which they are topped in the unsuccessful endeavour, no doubt, of getting rid of that discomfort of a house, viz., a smoky chimney.

Another mistake in planning tenements of street houses, where shops have to be introduced, is not taking care to close up the back of the skirting at the level of street floor, so that the evil smells and dangerous air of sunk floors may be prevented finding their way to the upper storeys. Bakeries, butcheries, fruit, and fish shops should be specially guarded against as to this, as I have known tenements through this overlook hardly tenable. As to bakeries, the plan of having them under the ground should be discarded, and well-lighted and ventilated places built on the street level at the back. An inspection of some of the bakeries of the city would show how much could be done not only to provide places which, by being well lighted and ventilated, would not injure the health of those who have to be early and late at their work, and in accordance with what we suppose to be the manufacture of what appears to be so white and pure on our breakfast table.

In ground at present being laid out by me for feuing every endeavour is being used to give effect to the recommendations contained in the brief observations which this paper sets forth, both as to the ground itself and the houses that are being erected on it. I do not wish here to say much as to the exterior of buildings, as that would be away from my text; only I would ask the members to give some consideration to what is called the back and end elevation of their design. The backs of houses should get a fair share of architectural treatment, and I often regret, when passing across the Dean Bridge, that the back of the prominent houses along the ridge above the water of Leith had not some effective features to carry off the baldness of their elevation; but this seemingly has been entirely overlooked by the designers, who have centered their whole efforts on the stately and dignified elevations of the street fronts and interiors of the houses, and neglected a well-shaped broken outline to the back, which would have added comparatively little to the cost, and added greatly to the picturesqueness of the situation.

### ART IN SCHOOLS.

THE first lecture of the session was delivered at the London Institution, on the 13th inst., by Archdeacon Farrar, on "Art in Schools for the Poor." The lecturer said he wished to awaken, if possible, more public interest in the enterprise—that of the Association of Art for Schools. Many of its exquisitely chosen pictures he pointed to on the walls behind him—birds and nests, and eggs, and trees, and animals, and historic scenes, and domestic incidents, and portraits of the greatest of men, and works of the famous painters of Italy and Holland and England and France. At the cost of 5% any school might be furnished with a selection of them. The society believed, and he shared their opinion, that, in this easy way, art, which had been the luxury of the rich, might be made a handmaid to the aspirations of the poor; that they could thus increase the sum of innocent human happiness, and offer a counterpoise to degrading pleasures; that they could kindle in children's minds a love for the beautiful which might second religion as a protection against the grosser forms of self-indulgence. The lecturer showed that where good art is neglected as an agent in education bad art will exert unchecked its vulgarising, its almost dehumanising influence. He insisted that nothing can more clearly show the *doctrinaire* character of our educational system than the extent to which all he had been urging upon their attention is ignored. We had been for years tithing mint and anise and cummin for the three R's, and had been totally disregarding the weightier matters of life—the admiration, hope, and love by which human beings live. One might go into a city school, and the children could tell at once the cost of 27 lbs. of bacon at 9½d. a lb., but might never have breathed the fragrance of a rose or so much as seen a bee. We made art a mere luxury for the rich, when we should glory in making it a free gift to the poor. We made of our schools a *terra incognita*, through having

in them no single object of interest or beauty which might attract any one to visit them. We spent yearly so many millions on education, and yet spared the mere fraction of expense which might help to make school hours more pleasant and school buildings less repellent, while at the same time developing in the children not only a higher intelligence, but also a sense of revolt against things bad and a dislike to everything morally and physically foul. We should not indeed bring Utopia at once into existence by surrounding the nation's children with objects of beauty and noble works of art, but all such work would be in the right direction. Moreover, Utopia was often but another name for time, and should any one foretell from our efforts but an infinitesimal influence for good amid the weltering surge of human misery seemingly threatening our civilisation, he might be answered in the words of an eloquent divine, that "God binds up even the grains of sand in the wings of the wind, that they may become a barrier for the raging of the sea."

### PUBLIC WORKS IN FRANCE.

IN the course of his interview with the Budget Committee last week, M. Raynal, the Minister of Public Works, gave some interesting information with regard to the execution of the public works planned by M. de Freycinet when in office. The construction of the railways has since been made over to the principal companies, but a sum of 35,160,000*l.* remained to be spent upon canals, rivers, and ports, of which 28,520,000*l.* was for canals, 4,000,000*l.* for ports, and 2,640,000*l.* for rivers. A further expenditure of 4,000,000*l.* for ports and 1,200,000*l.* for canals has since been found necessary, the port of Le Havre requiring 2,440,000*l.*, and that of Bordeaux 800,000*l.* It is proposed to raise the money required by loans to the State from the Chambers of Commerce, these loans to be repaid by annuities commencing in 1887, and spread over periods of ten, fifteen, and twenty years. The additional expenditure of 8,200,000*l.* is to be spread over a longer period, and to be provided for out of current revenue.

### THE EMPLOYERS' LIABILITY ACT.

A DECISION has been given by Sheriff Erskine Murray in a curious case, which was brought by a Glasgow journeyman mason against a master mason and builder, to recover damages for injuries. The defendant, John Riddell, whose son acts as his foreman, was in May last engaged in erecting a house, the bricklaying being done by a sub-contractor under him. A shed for stone-cutters was erected outside of the buildings, but the room being scanty, some of the men were sent by defender to work inside the buildings. When this happens, which is not frequently the case, it is both customary and necessary for the employer to provide either a shed or a shelter of planking over the joists above their hewing places to defend the men not only from the weather, as in the case of the outside shed, but from the danger of stones, bricks, &c., falling from above. Neil Blair, whose wages were 29*s.* 9*d.* a week, was sent by defendant or his son to hew inside the building, and a plank having fallen down and injured a stone at which he was working, and a complaint having been made to defendant, the latter promised that a shelter would be erected. A labourer, Curran, was directed to make such a shelter above the place where the stone-cutters were ultimately directed to work, and where their bunks or sieges had already been erected. The shelter so erected was about twelve feet above the hewers and was somewhat scrimp, as it hardly seems to have covered vertically the bunk or siege at which Blair had been sent to work, and certainly left no margin of safety. Blair was given a long stone, about five feet in length, to dress, which stone seems to have extended, when in position on the bunk, fully outside from below the shelter, and it does not appear to have been possible for Blair to put it in any safer position. After Blair had been working under this shelter for eight days, a brick one day, while he was working at the long stone, fell down from the top storey, and, striking something as it fell, went off somewhat at an angle, and struck him on the top of the head, injuring him. He was not able to work for eight weeks, except for a few days, when he tried to work, but found himself unfit. The Sheriff has decided that the main cause of Blair's injury was the fault of defendant or his foreman in not seeing that the shelter put over the hewers was sufficient for the purpose; that contributory negligence has not been sufficiently proved. A sum of 25*l.*, with interest and costs, has been awarded.

The Sheriff adds that it was clearly a failure of duty on the part both of defendant himself, who took personal supervision, as well as of his foreman, not to see that the shelter put over the hewers was sufficient. They undertook a certain amount of risk in having occasionally to go to and fro outside of the shelters; but they were justified in believing that the shelters would be such as to protect them while actually hewing. It was argued that the plaintiff ought to have complained if the shelter was not sufficient; but the master, not he, was the best judge of the insufficiency, as the insufficiency was not so notorious and patent as to be obvious at once to anyone.



## NOTES AND COMMENTS.

THE award of the jury in the competition for the new Exchange Buildings, Amsterdam, was sent in to the Burgomaster and Town Council on Saturday last, and was accepted by them. The numbers and mottoes of the successful designs were published in the Amsterdam evening papers of Monday, the 17th. They are as follows:—Prizes of 1,000 gulden (83½): No. 3. A. G. R. 20. "La bourse ou la vie." 38. Ne(e)derland. 69. The coat-of-arms of the town of Amsterdam, with the motto "Je maintiendrai." 73. Mercaturæ. 83. Perseverance. 91. Ammerack. 106. Lieven de Key. 150. The coat-of-arms of the town of Amsterdam, with the motto "In hoc signo floresco." 172. Y. Of these ten designs the authors of Nos. 20, 73, 91, 150, and 172 were selected to take part in the final competition. Two hundred designs were sent in, nearly the whole of which were hung in the rooms of the new museum. They occupied about 6,700 feet run, and covered about 40,000 feet superficial. The five designs selected for the final competition are all Dutch or Flemish in style, and consist of a mixture of brick and stone, in harmony with the surrounding buildings of the Damrak as regards material.

AN instance of very close tendering lately occurred in Belgium. A municipal building is to be erected at Schaerbeek, near Brussels, from the designs of M. VAN YSENDYCK. The first contract was for the construction of the building. The architect's estimate was 970,000 frs. M. DUBAUX, of Havre (Hainaut), offered to carry out the work for 965,000 frs., while two local builders, MM. SNAPS and MÈGE, were willing to accept 960,000 frs. The furnishing of the building was officially estimated at 126,460 frs. A tender of M. SNYERS-RANG, an agent in Brussels, amounted to 116,785 frs., and one from M. FRANÇOIS, of Etterbeek, to 115,000 frs. It is rather remarkable that a work of the kind did not attract a larger number of offers.

THE opposition to the proposed site for the Liverpool Cathedral has been so strong as to call for the appropriation of a large part of the Bishop's charge to an examination of "the thorny and troublesome topic." Dr. RYLE admits that it is easy to point out the defects of the proposed site; but His Lordship believes that no better site could be found "except by an expenditure in buying up buildings and clearing ground which it is frightful to contemplate." The Bishop admires the site on account of its centrality, being near three railway stations, the Town Hall, clubs, hotels, and leading places of concourse. From His Lordship's words it would seem as if the proposed site had been selected for other than architectural reasons, and that the committee have been attracted by the opportunities which the commercial environment gives to the zeal of the chapter.

ONE of the last works of RICHARD TREVITHICK, the engineer (and, in the opinion of Cornishmen, the inventor of the locomotive), was the designing of an iron tower which was to be a memorial of the passing of the Reform Bill. That project has been excelled by a design which is mentioned in connection with the Paris Exhibition of 1889. It is to commemorate the events of 1789, among which was the assembling of States-General at Versailles, or commencement of the French Revolution. The Paris tower is to be 300 mètres, or over 1,000 feet high. The top will be reached by means of a winding railway. At one time a work of this kind would be considered simply as a memorial, but in these days utility has to be combined. It is therefore suggested that the tower might serve as an observatory, a meteorological station, or a pharos for experiments in electric lighting.

THE apprehension of danger to inventors through the revelation of trade secrets in the proposed exhibition at South Kensington is not widespread. Sir FREDERICK BRAMWELL, the chairman of the Executive Council, was able to state at the Society of Arts on Wednesday, that 85 per cent. of the applications for space were for inventions for which patents had been obtained. When any one can obtain at the Patent Office a copy of a specification containing a description of an invention, the risks of showing the object itself in public may not amount to much. Sir FREDERICK BRAMWELL says that the same objection was made at the time of the exhibition of 1851, and it was found to be groundless.

THE crowds of people who daily pass by the National Gallery must have often wondered at the ugly structure of iron which has been erected in front of the building. It is simply a photographer's operating room, and was placed there to enable Messrs. BRAUN, of Paris, to reproduce the principal pictures in the gallery. The Fine Art Society applied for a similar privilege, but without success. The action of the trustees has not given general satisfaction. The directors of the Society say, with reason, "that to allow at one time a French firm to remove pictures from the gallery, and take away glasses—at another time a German firm to do the same—and in the interim to refuse to permit an English house to remove one single picture from its frame, is not to hold the balance fairly between all parties." It is an advantage that photographers who have been so successful as Messrs. BRAUN should undertake to publish prints from the National Gallery, for by doing so the character of the pictures will become universally known, and from the uniformity of the process the prints can be compared with those which represent the works in other galleries. But, while we admit all this, it is no less evident that an English firm of the standing of the Fine Art Society should have a corresponding privilege. MM. BRAUN's photographs are expensive, the style of them may not satisfy everybody, and copies would not be as available in an English town as those which were issued from Bond Street. In fact, there are so many things to be said in favour of the Society's application, we are surprised that the trustees should have any hesitation in granting it.

THE selection of a site for the Paris Exhibition of 1889 will give rise to much discussion. M. ALPHAND, the engineer of the city, proposes Courbevoie, and he is supported by five members of the Commission. But there are six who are in favour of Vincennes, and two prefer the Champ-de-Mars. Other places have been also recommended. Among them are Saint-Ouen, Levallois-Perret, Aubervilliers, the Bois de Boulogne; and it has been proposed to hold part of the exhibition in the Palais de l'Industrie, and part in some other place.

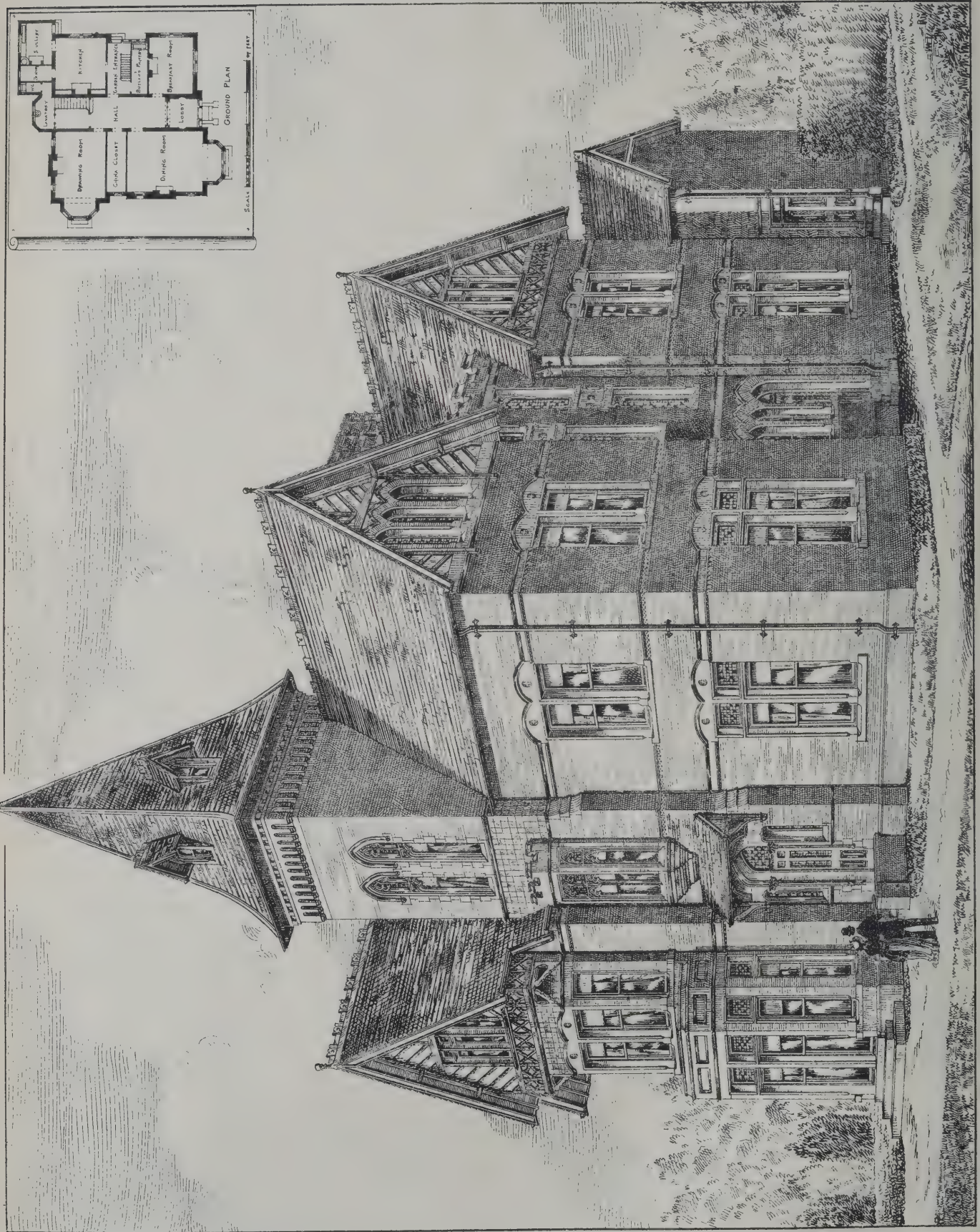
A REPORT has been presented to the University of Cambridge by the syndicate having charge of the Fitzwilliam Museum. The total cost for building and fittings of the Museum of Archæology has been 9,793*l.* 18*s.* 7*d.*, showing an excess of 993*l.* 18*s.* 7*d.* over the estimated cost. The expenditure for materials of study amounts to 2,335*l.* 9*s.* 11*d.*, thus making the total cost of the new museum 12,129*l.* 8*s.* 6*d.* The syndicate estimate that the annual expenditure on account of the Fitzwilliam Museum will be 1,714*l.*, and for the Museum of Archæology 735*l.*, making a total of 2,449*l.* The income from the Fitzwilliam fund is estimated at 2,869*l.*, leaving a balance of 420*l.* in each year available towards liquidating the debt incurred on account of the Museum of Archæology. The syndicate recommend that the excess of expenditure over the estimate not provided for, amounting to 1,040*l.*, be charged to the Fitzwilliam general fund; that the balance due to the Fitzwilliam reserve fund be transferred to the general fund; and that from January 1, 1885, a sum of not less than 400*l.* be appropriated in each year to the repayment of the debt upon the Fitzwilliam general fund until it is extinguished.

IN addition to the usual courses of Cantor lectures, the Society of Arts announces a course of lectures to be delivered under the Howard Trust, the subject being "The Conversion of Heat into Useful Work." The lecturer is Mr. WILLIAM ANDERSON, who has gained a reputation as a scientific engineer. The first lecture of the course will be delivered on Thursday, the 27th inst., and of the six lectures of which the course consists, three will be delivered before Christmas, and three after it. The following is the syllabus of the first three:—Lecture I., November 27.—Introduction; the laws of motion; potential and kinetic energy; laws of impact. Lecture II., December 4.—Oscillation, vibration, wave motion, pulsation in liquids and fluids; the luminiferous ether; porosity of matter, ultimate structure of matter; heat the consequence of molecular motion; transparency; diathermancy; specific heat; unit of heat; latent heat; absolute zero of temperature. Lecture III., December 11.—Molecular theory of gases; laws of volume, pressure, and temperature; isothermal and adiabatic lines of permanent gases and of vapours; JOULE's equivalent; the doctrines of CARNOT; the limits of efficiency of heat engines.









HOUSE, MAPPERLEY PARK, NOTTINGHAM.

W. A. HEAZELL, ARCHITECT.









PHOTO-LITHO. SPRAGUE & CO. LONDON

ST. MICHAEL'S CHURCH

MESSRS CHORLEY &





, FARNLEY, LEEDS.

NON, ARCHITECTS.

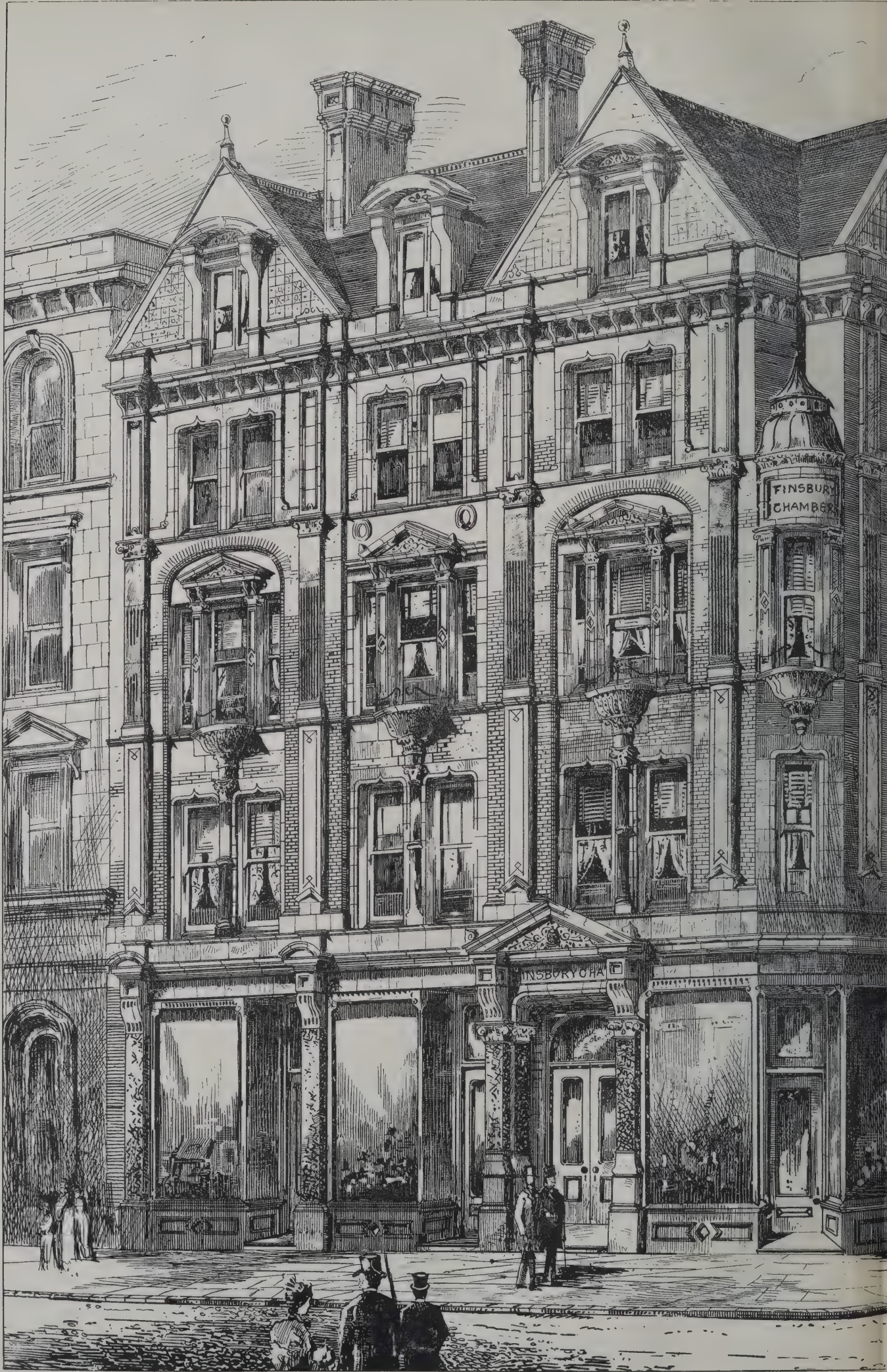












FINSBURY CHAMBERS,

J.W. BROOK

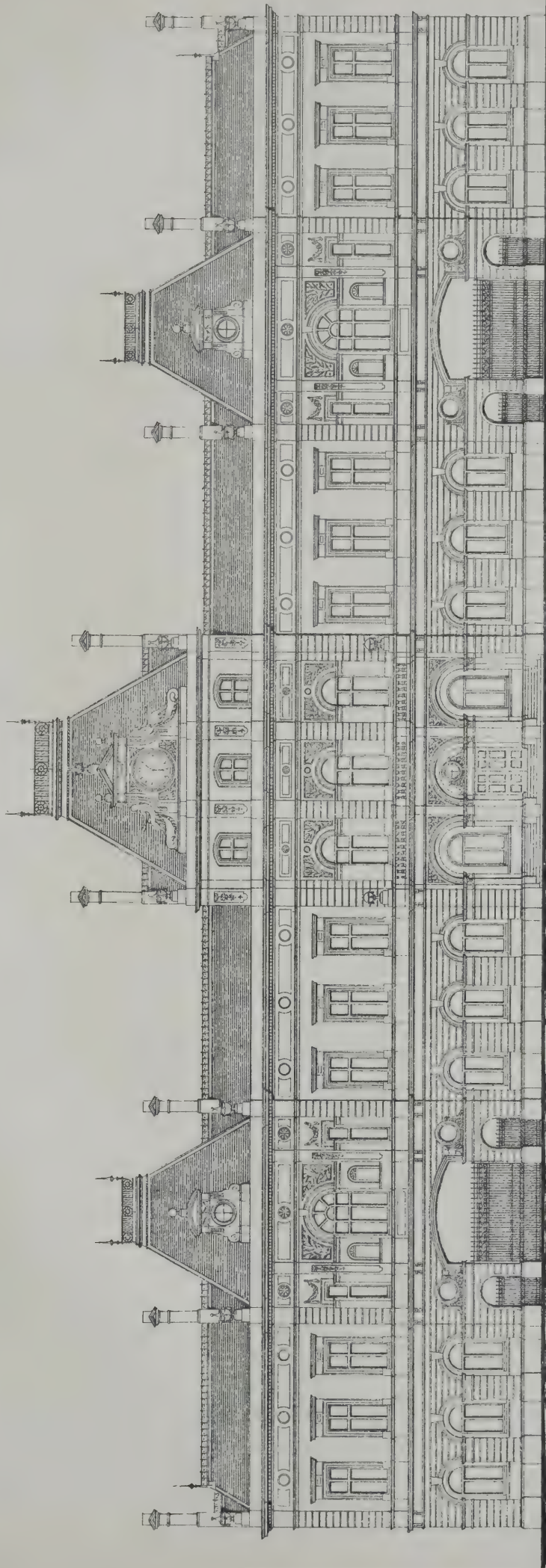












—Front Elevation—

DESIGN FOR PASSENGER STATION, BUENOS AYRES.  
W. C. BRANCWYN, ARCHITECT.  
JAMES LIVESEY, ENGINEER.







## ILLUSTRATIONS.

BLOCK OF HOUSES AND CHAMBERS, BROOK STREET, W.

THROUGH an oversight, the view of the houses and chambers in Brook Street, of which Mr. R. W. EDIS, F.S.A., is the architect, was published with the name of another architect attached. We therefore reprint the plate correctly, and request our readers to cancel the copy given last week. The illustration is a reproduction of a water-colour drawing which was exhibited this year at the Royal Academy.

ST. MICHAEL'S CHURCH, FARNLEY.

THIS building, which is now in course of erection, replaces a small Classic edifice erected in 1761, and known in the vernacular of the district as "t'owd bell chapel," from its only feature of mark, a small circular bell cote over the west front. The site of the church is said to have been previously occupied from remote times by the ancient chantry of the HARRINGTONS. No remains of the earlier buildings are now in existence.

The primary reason for the construction of the new church was the small area of the old one, which was inadequate for the accommodation of the parishioners, and made a change quite imperative. The parish being a poor one it was not possible to erect a building of any pretension, as the great ornament of a tower or spire had, temporarily at least, to be abandoned. Externally the structure is of light brown stone, of excellent quality, with slated roof. It relies for effect, not so much on ornament, of which it has little, as on simple grouping which harmonises well with its position in the midst of the multitudinous graves, picturesquely scattered, of an ancient burial yard, and surrounded by the lofty branching trees separating it from the undulating pasture land of Farnley Park. Internally the church has greater pretensions, though it requires little description, the arrangements being very much of the usual type. The stone dressings used inside are to be of red sandstone, the colour of this lending itself better to future decoration than the cold brown of the local stone would do. The roofs are throughout to be of pitch pine, left untouched by varnish, so as to acquire the rich, mellow tone which age then gives.

The contractors for the building are all local men, and the work is being carried out from the designs of Messrs. CHORLEY & CONNOR, of Leeds.

FINSBURY CHAMBERS, FINSBURY PAVEMENT, LONDON, E.C.

THESE premises are now in course of erection at the corner of Cross Street by the Finsbury Estates Company, Limited. The substructure of the former building on this site consisted of massive walls and arches, forming a portion of the vaults built over a large area of Finsbury Fields by Messrs. WHITBREAD & Co. about the year 1715. The basement of the new premises will have an almost uninterrupted area of 12,700 feet superficial, and will again be occupied by Messrs. A. PROBYN & Co., ale and beer merchants, who will also have some portion of the ground-floor for offices, bottling stores, stabling, &c. On the ground-floor, and facing towards Finsbury Pavement, there will be three shops, constructed fireproof, and the corner shop having a frontage to Cross Street, with show-rooms, &c. In Finsbury Pavement also will be the entrance to the suites of offices which it is proposed to form on the first, second, and third floors. This entrance, through an ornamental stone and granite doorway, leads up to the wide stone staircase to first floor, which on this floor is surrounded by an open arcading. The staircase to second and third floors will be of stone, and 7 feet in width, and lighted by a large lantern light. There is a demand for offices in this locality. It is believed that these suites will readily let at the moderate rents at which they will be offered. The fronts of the building to be faced with best white Suffolk bricks, relieved with Portland and Corsehills stone dressings and granite pilasters.

The contractor is Mr. W. DOWNS, Hampton Street, Walworth, S.E., whose tender, 14,967*l.*, was accepted. The works are being carried out from the designs and under the supervision of Mr. J. W. BROOKER, architect, 13 Railway Approach, London Bridge, S.E.

HOUSE, MAPPERLEY PARK, NOTTINGHAM.

THIS house has recently been built for Mr. O. BARNSDALE, and is situated on rising ground in Mapperley Park, from which an extensive view of the surrounding country is obtained. The house is built of the celebrated Nottingham

pressed red brick, with Ancaster stone dressings, the roof being covered by Broseley tiles. The entrance-hall is laid with MINTON's tiles, and it, as well as the staircase, are surrounded by a pitch-pine dado. The ceilings of lobby and hall are panelled with walnut ribs, and filled in with pitch-pine boarding. A walnut arcading is placed at the foot of staircase, giving a very pleasing effect. All the principal rooms are warmed and ventilated, independently of the fireplaces.

The whole of the works have been carried out by Mr. A. B. CLARKE, builder, from the designs and under the superintendence of Mr. W. A. HEAZELL, architect, Nottingham.

DESIGN FOR TERMINUS OF THE GREAT SOUTHERN RAILWAY OF BUENOS AYRES.

THIS design, originally made for the above building, has been superseded by another possessing all the principal features and details, and which is now in course of erection. The materials proposed were cement facings, cornices, &c., with red tiled roofs. This design was prepared by the direction of Mr. JAMES LIVESSEY, C.E., by Mr. W. C. BRANGWYN, architect, of London.

## ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE second ordinary meeting of the Institute of Architects was held on Monday evening, Mr. Ewan Christian, president, in the chair.

Mr. H. H. STANNUS gave a lecture on the subject of "The Architectural Treatment of Cupolas in General, and that of St. Paul's Cathedral in Particular." He illustrated his remarks by constant reference to drawings, photographs, engravings, &c., exhibited, and sketches on the blackboard.

## The Internal Treatment of Cupolas.

Mr. STANNUS said that he should confine his attention to the consideration of Italian cupolas, or cupolas in Classic style. He wished also to modify the original title of his lecture, and call it "The Internal Treatment of Cupolas." He gave a comprehensive definition of the cupola, which, he said, might be square, hexagonal, octagonal, polygonal, or hemispherical. What he termed an abscissate cupola was a hemisphere with parts cut off, sometimes four, sometimes eight, this latter being very like the cupola of St. Paul's. Mr. Stannus showed a model of the abscissate cupola used by the late Sir G. Scott in his Academy lectures, and lent for the occasion by Mr. J. O. Scott. This formed a cupola with its circumference turned into a square by having four sections cut off. The Byzantine period, Mr. Stannus said, furnished good examples of the abscissate cupola. A penetrated cupola differed from this by being cut into by vaults, after the fashion of a cupola with stilted arches. The depth of the soffit depended on the amount of oversailing of the penetration, and the effect should be studied by drawing them in perspective before carrying out the work. The penetrations should be at axial points. This was not the case at St. Mark's, Venice; but the axial *motif* thus broken into was restored by a set of figures lower down. The same also occurred in an example at Palermo, where figures were introduced between the penetrations or windows. Sir James Pennethorne's treatment for St. Paul's was a penetration, but treated rather as a built-up feature with pilasters and cornices. Mr. Stannus considered also the relation of the cupola with the subjacent architecture, and quoted the cupola of St. Peter's basilica as one that acknowledged every part of the subjacent architecture, and where every axis was recognised by the use of a pilaster. Correggio's work at Parma was an instance of ignored axes. Where piers had to be dealt with, it was a common practice to arch over the space between the piers, as was done at St. Peter's. There were vaultings again the *motif* of which had evidently been furnished by the old Roman aqueducts. Ribs had been much used in cupolas, especially in large cupolas with lanterns, which seemed to demand some treatment suggestive of support. The rib, which was very suitable to give emphasis to a polygonal cupola, provided it were narrow, would be out of place at St. Paul's, because if the hemispherical cupola were thus cut up it would destroy its apparent infinity. There were a variety of rib-treatments, Mr. Stannus said, but he would only call their attention to that at St. Mary Major, Rome, where each rib, to use heraldic language, was cotted, and each pilaster had a half pilaster attached on each side and carried up into the cupola. The effect produced was good, and its great charm was the perfect articulation between the cupola and the subjacent architecture. Sub-panelling was one of the commonest of Italian practices, and ribs carried up into a cupola were connected by circles and panels. The circle from its essentially non-angular form fitted in most prettily in any treatment, and evaded the difficulties that beset other geometric forms. Mr. Stannus pointed to examples of interlacing or intersecting ribs and to stella coffering. This star shape was essentially an Arab treatment. They delighted



in evolving their wonderful devices out of geometric figures. Then there were parallel ribs, a treatment evolved from the construction and form of the cupola itself. Mr. Stannus next referred to the bad effect produced by the artists of former days, who, on a flat surface, painted a magnificent perspective, showing storey upon storey, arches and pilasters piled one above the other, &c. The picture looked well from one point of view. If you moved from that spot everything in the picture was distorted, and produced a most displeasing effect. It was really nothing but scene painting, and quite unworthy to be used in a monumental building. In allusion to the employment of coffers, Mr. Stannus noted the wide field it opened out, and, speaking of the work at St. Bernardino, Verona, characterised it as one of the most perfect types of articulation he had ever seen, and most charming in effect. There was a kind of coffering which might be called "omitted reticulation," a combination of squares forming a network appearance, but with some squares omitted. By this means various beautiful shapes were got. Then there was a treatment of wide and narrow coffers, a stiff treatment: also of rib and coffer, which was very beautiful and thoroughly articulate. Radial figures were next considered. These constantly occurred in St. Mark's, Venice. There was a wonderful impression of solemnity about those great oversailing figures that seem to loom and brood over the spectator from their golden ground. Marginal panels and zones were next described.

Mr. Stannus then referred to a practice associated with the name of Correggio. A painter was in those days esteemed more of than an architect, and the painter thought he had only to stoop to do architecture. But as regarded doing good architecture, these painters were conspicuous rather as examples of how not to do it. It was matter for regret that, in the Sistine Chapel of the Vatican, the architectural lines had not been made predominant. However, it had set the bad example, and others mistook faults for good style and imitated them. The fashion once started increased at compound ratio. The figures had tremendous effect and altogether overpowered the architecture. Fringes of figures, angels' wings, &c., were carried over the ribs on bits of wood. Correggio had done worse than this with his clouds at Parma. Another example was the representation of the expulsion of the angels from paradise in the Church of the Apostoli, at Rome. It was a treatment subversive of all architectural and religious feeling. Decoration to be good should articulate with the architecture. Thus at St. Paul's the features of the subjacent architecture must be considered. Mr. Stannus said the decoration should be original, appropriate, and serve to emphasise the axes of the cross. It should suit the gradual unfolding to the eye as the spectator walked up the nave. Mr. Stannus considered the cupola then in regard to the architecture, and ran over various treatments of ribs plain and intersecting, coffering, radial figures, marginal panels, zones, all of which were unnecessary, unsuitable, or objectionable. Axial panels, with figures, he said, might do. Coming to the circle, Mr. Stannus said it was the section of a sphere, and of a sphere only, and was the one only figure suited to a cupola. Stevens adopted circles as the main feature of his design. The ribs came as a later introduction. Circles were characteristic of imaginings and of visions, and had this advantage, that however much other geometric figures were distorted, as seen from different points of view, the circle could never become distorted; at the worst it only became an ellipse. Then there was the gloom and the distance of the lofty interior to be considered. Simplicity of form and colour was found to be all important. Gold was essential; the gold permeating everything for the sake of continuity, and to avoid the plaque appearance. Nothing else could give the cupola so noble and grand an appearance. Cockerell had suggested that if bright colours were put up one might lose that distance, but he (Mr. Stannus) said if we lost colour and got more gold the atmosphere of mystery would be preserved; the mystery of Heaven, not the mystery of darkness. As to scale, Thornhill's design dwarfed everything, whereas Stevens's version preserved scale, and even increased it. Three years back he (Mr. Stannus) conceived that circles were the right thing, and that ribs might be omitted; and since his version of Stevens's design had been up in St. Paul's the ribs had been criticised: hence he had ventured to produce the design he had made three years back, but which had never been seen till that evening.

The rest of Mr. Stannus's remarks regarded the matter of storiage, and, in conclusion, he said his thanks were due to the Dean of St. Paul's, Mr. Penrose, and other gentlemen for drawings, &c., lent for the occasion, particularly to the Dean of St. Paul's for lending Stevens's model of the cupola, then exhibited in public for the first time.

Mr. H. H. STATHAM proposed a vote of thanks to Mr. Stannus. Mr. Statham considered that Wren would have discarded the idea of the peristyle, and, consequently, carrying out the decoration of the dome in special reference to it. There was a floating rumour that the actual dome was coffered before Thornhill painted it. This was not improbable, and the state of the original model almost implied that Wren had contemplated it. Most of them, however, would dismiss the idea of coffering from their minds as a commonplace treatment for a great dome. Next, should the lines of the pilasters be strongly marked by ribs? To treat a circular dome

with ribs was manifestly wrong, however fit for octagonal domes; nor would broad ribs do in an octagonal dome. His (Mr. Statham's) opinion still was, that to strongly accentuate the dome, to destroy its unbroken surface, would be more or less to take away its impression of immensity and grandeur, and make measurable the characteristic which Mr. Stannus had called its greatest glory. If it were granted that they should not divide the dome up with these strong vertical lines, what were they to put there? Mr. Poynter's painting, he thought, was one of the finest and most expressive that had ever come from a painter's hand. He went to St. Paul's to examine it *in situ*, but it could not be seen except from the Whispering Gallery, and he came to the conclusion that it was a mistake to put pictures in the dome that depended for effect on telling a complicated story. There was one idea as to the decoration of domes. Mr. Burges's scheme approached nearest to it, and it had never yet been fairly carried out. No pictures requiring anything like a close examination should be put up, but something grand yet simple, easily to be grasped and not depending for effect on the special play of the countenance in the figures, &c., all which would tend to dwarf the architecture.

Mr. J. P. SEDDON seconded the vote, and said that the dome had been left by Wren one vast, unbroken, sublime, and grand vault. No other architectural features should be added to what it originally was. The only decoration should be painting or Mosaic. Sham attics, orders, ribs, &c., would be intolerable. The dome was quite out of sight of the nave; it was no use considering one-half of it, as it was not so seen. If painted the decoration should be free both from archaic conventionalism and lawless fancifulness. The introduction of ribs, tangential circles, &c., would necessarily produce a confusing effect in the dome, which was not that of a Gothic but of a Classic building, and therefore required an exactly opposite treatment, by, for instance, the use of zones. The scheme by Burges, involving a sham, was wholly indefensible. Thornhill's work disturbed the dome comparatively little, and moreover had the right of possession. Botticelli's picture in the National Gallery was an example of what would be almost exactly the right thing both in subject and in execution.

Mr. E. ARMITAGE, R.A., said the difficulty arose when figures were introduced that you must make them of different sizes to fill large and small panels, otherwise it would produce overcrowding. Seen from below, it gave the impression of being a section of an exhibition gallery, showing a lot of different-sized pictures arranged together higgledy-piggledy, instead of giving one the grand idea of a dome. Whatever might ultimately be done, he should always advocate the putting in of ribs or divisions as a grander treatment for the dome. This might be united with Mr. Burges's design without introducing archaic or Byzantine figures. Mr. Armitage condemned the principle of making eight sections of the dome, and pointed out insuperable difficulties in painting figures with that design. The dome was extremely dark, and only in bright summer weather could anything be seen there; so, whatever subject might be chosen should be of the most simple character, flat tints and a gold background and white figures, with a grand outline which the eye could and would follow. Modelling of figures would be perfectly wasted. In this way, and if the rest of the building were decorated in accordance with it, we should feel we had got a suitable treatment for the dome.

Mr. J. D. CRACE said the object of the rib treatment had been overlooked. Since the earliest and most noble domes showed this treatment there must be a reason for it, and the reason was that ribs could alone explain the vertical section of the dome. Zones could not. Botticelli's dome, treated in zones, was really a niche. He endorsed what Mr. Armitage said as to figures. Some part of a dome was nearly always in bright light. You saw gold brilliantly, but you did not see variations of colour. The rib treatment had not had a complete or just trial, for the reason that none of the vertical ribs were undisturbed. At St. Peter's, where the dome was divided by ribs, the main vertical lines were absolutely undisturbed; not interlaced with anything, and the circles were kept quite clear of them. Mr. Stannus's circles, on the contrary, touched the ribs.

After some remarks from Mr. W. White, the discussion of the subject was adjourned on the motion of Mr. Aitchison, A.R.A., seconded by Mr. E. Woodthorpe.

## THE RESTORATION OF WESTMINSTER HALL.

THE Select Committee of the House of Commons appointed to inquire into the plans for the restoration of the exterior of Westminster Hall sat at Westminster on Wednesday. Mr. Shaw-Lefevre took the chair, and there were present—Mr. W. H. Smith, Mr. Walter, Lord Randolph Churchill, Sir R. Wallace, Sir H. Holland, Sir E. Reed, Mr. Dick Peddie, Mr. Cheetham, Mr. Rylands, Sir John Lubbock, and Mr. Beresford-Hope.

Mr. Shaw-Lefevre said he proposed to call Mr. Pearson, the architect whom he, in his capacity as First Commissioner of Works, had consulted, and then to ask the Committee to inspect the site of the suggested buildings. It would then, perhaps, be as



well if hon. gentlemen returned to the committee-room where, if necessary, other questions could be asked of Mr. Pearson. Upon the conclusion of Mr. Pearson's examination he would call Mr. Taylor, one of the surveyors of the Board of Works, as to the condition of the walls and the possibility of their lasting in their present condition any length of time. Whenever the Committee decided to continue their investigations he should ask Mr. Dick Peddie to call any witnesses he might have in opposition to the scheme which had been for 'some time before the public. He had received a letter from Mr. Barry, son of Sir Charles Barry, saying that he wished to lay before the Committee his father's views on the subject, and he had informed Mr. Barry that there was no doubt that the Committee would give him an opportunity of expressing his opinions. He had also letters from several of the leading architects of the day expressing their views on the matter, but he thought he should hardly be justified in calling them as witnesses unless Mr. Pearson's views were seriously impugned.

Mr. Pearson, R.A., said he was invited by the Government to advise them as to the restoration of the west front of Westminster Hall. He was acquainted with the construction of many public buildings, having devoted considerable attention to the old architectural styles. The Dean and Chapter of Westminster had employed him to carry out the repairs and restoration of Westminster Abbey, and he had been engaged on the work for four or five years. Since he was invited by the Government to advise them on the restoration of the west front of Westminster Hall he had spent much time in working out the structural antecedents of the building, and in preparing the plans with which the Committee had been supplied. He began by investigating the foundations of the adjoining building, and these and the remains of other foundations which he had discovered agreed in a remarkable degree. Mr. Pearson described the character of the architecture of the Hall, and declared that the architectural styles of the Norman, Richard II., and Tudor periods were to be found there. His investigations confirmed his opinion that there was a double-storeyed cloister with flying buttresses erected in the time of Richard II., and also a building at right angles to the northern side of the western front, a building which was in Queen Elizabeth's time used as a music-room, but in later times as the Court of Exchequer. He proposed to restore the exterior of the building to what he considered was its original condition. He would erect a double-storeyed cloister, the lower one having open arches and the upper one having windows very much of the same character as those in the main building. The upper storey would be reached by stairs leading from the Hall. He had prepared a plan with a single cloister, but he did not recommend its adoption. The open storey might be used as a carriage approach to the Hall. His proposal consisted of four parts—first, the construction of a double-storeyed cloister under the flying buttresses; secondly, the erection of a building at right angles to the Hall, on the site of Queen Elizabeth's music-room; thirdly, the raising of the tower at the north end of the Hall; and fourthly, the completion of Sir Charles Barry's work—the Houses of Parliament—at the corner of St. Stephen's Porch. The cost of the cloister part of the scheme, including the building at right angles with the Hall, would be 21,000*l.*; the cost of completing Sir Charles Barry's work, 5,000*l.*; and the cost of adding to the tower on the north front, 8,800*l.* The cost of repairing the wall and buttresses would be 8,000*l.* The result of carrying out his plans would be that they would get a chamber 31 feet by 27 feet, a stand for horses, four large rooms in the upper part of the cloister, and three in the tower.

Mr. Shaw-Lefevre asked whether it had been the intention of Sir C. Barry to raise the tower.

Mr. Pearson replied in the affirmative, the object of Sir C. Barry being to bring the Hall into harmony with his buildings. The views of Sir C. Barry on this point should be carried out. It had been the intention of this architect to erect a new wing to the Houses of Parliament in front of Westminster Hall, shutting in that edifice from view, but it would be most undesirable to carry out this plan. The sight of Westminster Hall against the more florid work of Sir C. Barry was most valuable from an architectural point of view. The broad, unbroken roof and the general breadth of the Hall was a foil to the intricate and delicate work of Sir C. Barry—it was a centre of repose in the picture. Most old architectural remains showed the work of various periods. The effect of the Hall as seen from a distance, if the cloister were not constructed, would be most unsightly. It was not common for buttresses to stand attached to a building with nothing under them—in fact, he only knew of such a thing in the two cases of the chapter-houses of Westminster and Lincoln. On some of the stones of the wall of the Hall the marks of the Norman masons were to be seen, but, if the Hall was left in its present state, would soon disappear, the stone being soft and incapable of resisting the action of the air. If, however, a cloister were constructed in front of the wall, the stonework could be left intact. As to the windows of the building, he should be sorry to see them lengthened, as it would involve the destruction of the arches, which dated back to the time of Richard II.

Upon the return of the Committee, Mr. Pearson, replying to Mr. Rylands, said that in the event of the lower cloister not being used, it would be impossible to lower the ceiling of that cloister in

order to give greater height to the roof above. If only one cloister were erected, the importance or dignity of the Hall would, in his opinion, be diminished. His great object in the plans he had prepared was to preserve the historical interest of the building. In answer to Mr. Dick Peddie, Mr. Pearson said his instructions were to prepare plans for the preservation of the walls and buttresses, and in making his investigations he was struck with the original design.

Mr. Taylor, an architect, and one of the surveyors of the Office of Works, said the wall of Westminster Hall now exposed to view was composed of several kinds of stone, and his impression was that if the wall were left exposed, having been covered for so long a time, it would very soon crumble and decay.

The Committee afterwards adjourned to the 21st inst.

## THE INDUSTRIAL ARTS OF INDIA.

THE following letter from Major Keith, C.E., late Assistant-Curator of Indian Monuments, appears in the *Times*:—

The Government of India have voted five lakhs towards the South Kensington Exhibition of 1886, and with a view of resuscitating the industrial arts of India. All friends of the Indian artisan will wish success to the undertaking, although the most sanguine may well doubt whether the revival of Indian art is anything more than a vain dream. There are several inherent causes leading to decay, and they are beyond all remedy; while there are others equally fatal, but susceptible of being remedied. With your kind permission I should like to offer a few reflections on the subject. (1) An age of costly magnificence has long been superseded by a utilitarian one, when men build for the passing decade, not for posterity; nobles no longer construct magnificent places of pleasure resort, to be converted into still more superb places of sepulchre at death; (2) with the decay of native courts many an art and industry perished; (3) rajahs are now more than apathetic on the subject; and (4) the masses with whom a taste for the beautiful in art once existed are no longer leavened with a love of it. Occasionally the village coolie may still be seen decking his mud hamlet with arabesque and fresco; but it is merely a vestige of that taste which once impregnated all classes in India. On the other hand, a great deal may be done by way of conserving the few industries that still struggle for existence, if the ruling classes could only be aroused to take an interest in the matter. At the same time the energetic Secretary to Government for Agriculture and Revenue, aided by Dr. George Watt, who is a host in himself, will require to be quick if the few surviving industries are to be rescued. Every year adds to the death-roll of the purely traditional arts. An annual visitor to Delhi, it was only last summer that I observed how the seal engravers in the Dareeba had perished, a race of men whose performances might favourably compare with the best work turned out by Messrs. Strongitharm, of Pall Mall. Other towns have similar experiences. In Gwalior I tried to unearth and rescue several industries, but no sooner had I partially succeeded than an evil genius interposed, and by a negative procedure brought about a collapse of the work and severed me from work to which I wished to devote my remaining years. The money I had collected for a museum to assist impoverished workmen by making it an agency and registry of their work has been spent on purposes I never intended; the initial exhibits I had prepared for the museum were retained at Calcutta instead of Calcutta supplying itself with duplicates; and finally, the stone-carving industry, the revival of which I had tried to embody in the "Gwalior Gateway," now lying at South Kensington, is likely to be relegated to obscurity by my enforced retirement from Gwalior. I am unable to offer any explanation touching the miscarriage of honest endeavours for the relief of starving workmen in Gwalior. Possibly my offence lay in bringing inadvertently to notice the fact that there were starving workmen there. I fully expected that the Maharajah Scindia would have thanked me, but this he never did, nor did he offer me the slightest personal encouragement during the years I was in Gwalior. I had endeavoured to bring the stone-carving industry to notice, numbering as it does some 2,000 workmen, chiefly unemployed, and to find work for these poor people, but unsympathising ignorance determined to strangle the effort. It will be said that the Maharajah Scindia gave so much money for the "Gateway," but it was in the interests of his subjects that I proposed it. I myself never got a farthing of remuneration, although I devoted months in the height of a central Indian summer towards the undertaking. A sufferer both in health and pocket, I have some reason to complain. Those who wish to see what Indian carvers can do, may do so by visiting South Kensington. Without any technical training an urchin barely twelve years of age will, by simple eye-sketching, trace out the most delicate arabesque, and this with rare fidelity, his only pencil being a rough piece of charcoal. After this he will carve it with the utmost delicacy and incisiveness. One great mistake we make in our relations with Indian art and industry is to treat India in the same way as we treat our own country or the colonies, where there was no indigenous art. We still flood it with Europeans who are supposed to teach men far more capable of teaching them. The



native is not a born administrator, but a little conventional training will make him an admirable architect, engineer, &c. It is certain that much of the work done by European agency could be very well carried out by natives. A contention like this is sure to provoke opposition, but it is no less true.

Probably the most discouraging factor in the revival of Indian art and industry is the apathy of the Anglo-Indian community. It may be very desirable to seek European markets and aid from without, but unless a movement is started from within the attempted revival will not be a success. On the part of trades unions, Birmingham designers, Manchester, and many other interested parties there will be a determined opposition against any extensive introduction of Indian ornament and design. And yet India deserves some compensation for the wholesale injustice done to her weavers and print-makers by the premature introduction of free trade and the unjust retention of a protective duty on foreign imported silver into England. I have remarked that it is almost a dream to predict any general revival of Indian art, but I feel convinced at the same time that if all collectors followed the excellent example set by Mr. Growse, C.I.E., of Bulandshahr, and Mr. Coldstream, of Lahore, much good may be attained. These gentlemen have zealously endeavoured to promote indigenous art, and until their example is more largely followed little good may be anticipated. A great deal can be done through the medium of local exhibitions and museums, provided the governing classes throw aside their insularism and isolation, placing themselves more in accord with the sympathies of the people. Hitherto their example has been of a baneful kind, seeing that they encourage all sorts of incongruous forms of architecture. Their want of example was demonstrated at the Calcutta Exhibition last year, where barely a fraction of the official class, who constitute the aristocracy of the country, attended, and a still smaller fraction purchased exhibits. Most of the leading rajahs, such as Scindia, Holkar, and Cashmere, were conspicuous by their absence. The exhibition was in no sense a national one, nor did it fulfil its duties as an educator of the people. This was more to be regretted seeing that it was very popular with Bengalees, male and female. Possibly the failure of duty on the part of the official class is an outcome of a growing detachment between races, which constitutes a real internal danger to the country. This isolation is not the product of the Ilbert Bill, but of an age which witnesses weekly steamers from England, telegrams, parcel posts, and an annual exodus to Simla. The popularity of the old Indian of a former day arose from his living among the people, spending more than a tithe of his income upon them, and largely sympathising with whatever gave them joy and pleasure. His wife shared his sympathies and anxieties. All is now changed. The lady either lives in Simla all the year round, or lives separated with her family in a villa at home. All Indian subjects are now voted a bore at messes and clubs. To take an interest in the manners or customs of the people, or to venture a stray remark about archæology, &c., is to expose one's self to a rejoinder after the fashion of Dr. Johnson, who declared that he did not wish to hear any more about the second Punic war. No wonder if a superlative in Simla was shocked at a room in Government House being furnished with Indian material, or at the president of an industrial committee in Delhi proposing to obtain tools from England to teach some of the finest carvers to be met with anywhere. Until this feeling is reversed it is hopeless to expect any revival of art in India.

## THE CITY COMPANIES.

### 2. The Carpenters' Company.

A BROTHERHOOD or guild of carpenters is believed to have existed in London about 1350, but under what circumstances is not recorded. The first charter to the present company was granted in 1477, 17th Edward IV.

Edward IV., by charter (dated July 7, 1477), granted to certain freemen of the mystery of carpentry of the City of London, that they or any of them might establish a brotherhood or guild within the City to remain for ever, to consist of one master, three wardens, and commonalty of freemen of the mystery of carpentry abiding in the City of London, and the suburbs and precincts of the same, and of the brethren and sisters of the freemen of the said mystery, and of all others who of their devotion will be of the same brotherhood or guild; and that the same master, wardens, and commonalty should be one body and one commonalty, incorporated by the name of Master, Wardens, and Commonalty of the Mystery of Freemen of the Carpentry of the City of London. And further, that the said commonalty, that is to say, the freemen of the mystery, might, whensoever they would, choose and make of themselves, according to the ordinance by them to be made, one master and three wardens, to transact the business of the mystery, brotherhood, and guild, and to oversee, rule, and govern the same, and all persons appertaining to the mystery within the City of London; and the wardens and commonalty were authorised to make ordinances for the good rule and government of the same mystery. This charter was exemplified, ratified, and confirmed by Philip and

Mary (a Charter of Inspeximus), and also by Elizabeth, the latter exemplification being dated November 8, 2nd Elizabeth.

James I., by charter (dated July 15, 5 James I.), granted to the master, wardens, and commonalty of the mystery of freemen of the carpentry of the City of London, that they should exercise the powers of search, correction, and government of all the freemen of the art or mystery of carpenters of the City, or using or exercising the said art or mystery within the said City or the suburbs of the same, or within two miles thereof, together with powers for the inspection of timber, and regulation of matters relating to the trade.

Charles I., by charter (dated July 17, 16 Charles I.), reciting the preceding charters, and that various frauds and deceptions were practised in the trade, granted to the master, wardens, and commonalty of the company, that the master, wardens, and assistants for the time being, to the number of twelve or more, of which the master and wardens for the time being to be four, being met together upon summons to be made for that purpose, should have full power and authority to appoint, constitute, and make ordinances, decrees, and constitutions in writing for the good rule and government of the master, wardens, and commonalty of the mystery, and of all other persons being free of the art or mystery, or using the same art or mystery within the City of London, or liberties of the same, and for declaring in what manner the master, wardens, and commonalty, and all such persons as aforesaid, should behave themselves, and use the occupation of the said art or mystery.

Charles II., by charter (dated October 20, 26 Charles II.), reciting and confirming the preceding charters, granted, upon the humble petition of the master and wardens of the company, the oversight and government of all and singular persons, whether freemen of the said mystery, or using or occupying the same within the City of London, or within four miles of the same, together with very extensive powers and privileges for exercising the oversight, search, and measurement of all and all manner of timber, timber stuff, and materials, and the works and workmanship thereto within the before-mentioned limits.

These powers had been already restricted by Act of Parliament, 1666; for, besides a renewal of the prohibition of timber buildings, backed by such a convincing argument as the Great Fire afforded of its necessity, the City were to appoint surveyors to inspect the buildings; whereas all buildings, at least as far as concerned the timber used in their construction, had previously been under the surveillance of the Carpenters' Company.

James II., by a charter (dated March 19, 2 James II.), granted to the Carpenters' Company (upon the surrender of all their powers of nominating and electing the masters, keepers, or wardens, and assistants, and clerk of the company), re-incorporated them by the name of Masters, Keepers, and Wardens and Commonalty of the Freemen of the Mystery or Art of Carpentry of the City of London. One master and four wardens were appointed to hold office until the second Tuesday in the month of August then next, and from thence until others should be elected, pursuant to the power therein contained. And it also granted that they should have twenty-two assistants, named and appointed to continue in office during their natural lives, or until removed for lawful cause. And it is declared that whensoever any masters, keepers, wardens, or assistants should die or be removed from office, that then and in such case another fit person or persons should be elected and chosen into or to the place or places of the person or persons so dying or being removed or displaced by such person, and in such manner and form as thereinbefore were used in the company for the space of seven years then past. The charter is entered in the books of the company, but with a memorandum of its having been revoked by the Statute 2 William and Mary. In 1666 an Act of Parliament was passed ordering brick buildings in place of wood, and all carpenters, &c., not freemen of the City employed in the building were, for the space of seven years, to be allowed the liberty of working as freemen, and all who should so help for seven years were to enjoy the same liberty for their lives. In 1693 an Act of Common Council was passed by which all persons carrying on the trade of carpentry in the City of London were compelled to bind their apprentices to the Carpenters' Company.

In its origin the Carpenters' Company was a brotherhood or friendly society, and gradually became a trades guild for the protection of the trade, and by its charters had committed to it the overlooking of buildings in the City of London and suburbs, in order to prevent bad workmanship and the use of bad materials. In the early part of the seventeenth century viewers were chosen from the Carpenters' Company for that purpose; but after the Fire of London, in 1666, it was supposed that a bricklayer would be a better judge of buildings then erected than a carpenter, and though others were afterwards appointed, the Building Act of 1774 removed the duties of the viewers to district surveyors, who now do the work originally entrusted to the Carpenters' Company, though as a friendly society or guild it still continues and exercises its functions, and fulfils the trusts committed to its charge.

The company have a license to hold property in mortmain, "dated the one and thirtieth day of July, in the two and thirtieth year of the reign of Charles the 2nd." The license provides that all lands then held were to be considered the property of the



company, and they were empowered to acquire land of the additional value of 200*l.* per annum. These powers have not been exceeded.

The company possesses no right of exercising superintendence over, nor has any duty or discretion to encourage in any way, any art, trade, or business. The Act of 1774 invested all supervision and control of buildings in the City of London and its suburbs in the hands of district surveyors, and deprived the company of all control it formerly enjoyed in such matters.

The governing body of the Carpenters' Company consists of a master, three wardens, and Court of assistants, all of whom have served previously the office of master or warden in accordance with the charters, and according to by-laws and ordinances approved by the lord treasurer and justices of either Bench on the petition of the master and wardens.

The master and wardens are elected by the livery of the company annually on the second Tuesday in August, having been first nominated by the Court. The qualifications are, that those nominated must be liverymen of reputable character, and have always paid 20*s.* in the pound to their creditors. In almost every case, if otherwise eligible, the senior warden is elected to be master, the middle or renter warden becomes senior warden, the junior warden becomes middle warden, and the senior liveryman, if eligible, is elected to the office of junior warden.

The master presides at all the meetings of the Court, and pronounces their decision on all matters which are brought before them and on which a vote is taken. The wardens assist the master in the general business of the company, all of them attending to pay the pensioners. The two junior wardens also attend to receive the rents quarterly, check the vouchers of expenditure, visit the almshouses, and make due inquiries about applicants for relief and for admission to the freedom and livery of the company. No fine is taken on admission to the Court; the members are paid no salary, but receive fees for attendance. The master and wardens receive no extra fees for their services, but are only paid the same as the other members of the Court.

The ordinary business of the Court is attending to bind apprentices, admit to the freedom and the livery, to order pensions or relief to poor members or their widows, to discuss all questions as to the letting and management of the property, and to give such orders as may be necessary for the management of the charities committed to their care. They also visit the estates periodically, and annually visit the almshouses both at Twickenham and Godalming, for which attendances no fees are given. The Court meets on the first Tuesday in every month, except September, and at such other times specially as may be necessary from press of business. The votes of the members are taken by show of hands, and minutes of the proceedings are taken and kept by the clerk, which are read at the succeeding Court, and are always accessible to any member of the Court.

In one of the ordinances, signed by the lord chancellor and others, power is given to the master and wardens to expel from the fellowship, but no case of suspension or removal is recorded as having taken place for the last eighty years. There are no by-laws sanctioned by the courts of law, but all orders are made by the governing body, who have full powers to regulate, in all respects, the affairs of the company.

There are two classes of members, viz., liverymen and freemen. Females are entitled to the freedom either as widows or daughters of freemen. The freedom may be obtained by patrimony, by servitude, or by redemption. In the two former cases the fee to be paid is 3*l.*, the stamp duty being 1*l.* If admitted by redemption the fee is 15*l.* 15*s.*, the stamp duty being 3*l.* In this latter case a form of application has to be filled up, signed by two householders; inquiries are made by the wardens. The candidate must be proposed by a member of the Court and balloted for, and a majority of two-thirds is necessary for election.

The company have no power to compel persons using the art or mystery of carpentry in the City of London and suburbs to become free of the company. Anyone entitled, either by patrimony or servitude, can claim the freedom. There are, and always have been, members of the company who are carpenters, and many others indirectly connected with the trade. At the present time the number would be nearly one-fourth of the members.

There is no rule or process at present in existence for the disfranchisement of freemen. The number of the livery is limited to 150 by an order of the Court of Assistants. All applicants for the livery have to get a form signed by two householders similar to that for the freedom. If the warden is satisfied as to the respectability of the candidate, he is proposed by a member of the Court and balloted for. The election rests with the master, wardens, and Court of Assistants, and a majority of two-thirds is required. A liveryman may be removed for gross misconduct. If a liveryman fall into reduced circumstances and petition the Court, his livery fine is returned, and he is struck off the list of the livery and becomes eligible for a pension. The fee for admission of a freeman to the livery by patrimony or servitude is 35*l.*, and by redemption 52*l.* 10*s.* The freedom of the City of London is not a condition precedent to becoming a freeman of the company, but all freemen of the company must be free of the City of London before they can become liverymen.

In the event of a freeman or his widow or children falling into necessitous circumstances, and applying for assistance, the case is considered and inquired into, and, if found deserving, the freeman or his widow is granted 14*l.* per annum, or (if both be dead) his children 10*l.* each per annum. They are also eligible for admission into the almshouses at Twickenham. A liveryman is usually invited to be present at three entertainments given by the Court during the year. If a liveryman fall into necessitous circumstances his livery fine is returned, and he, or (in case of his death) his widow, would be placed on the pension list at 40*l.* per annum, or his children, if necessitous, at 20*l.* per annum each.

The master, wardens, and Court of Assistants have a fee of three guineas for attendance at the business courts, which usually occupy three to four hours. A fee of one guinea is given for attendance on any special committee, and the warden, on his monthly visits to the almshouses, receives 8*s.* for his expenses, but no fee for his services. The average amount for the last ten years paid to the Court in fees for managing the affairs of the company has been 807*l.*

### THE GAMBETTA MEMORIAL.

THE Gambetta Memorial competition has been decided. The design submitted by M. J. P. Aube, sculptor, and M. Boileau, architect, has been accepted. It consists of an obelisk with two large figures, representing Truth and Force, and Gambetta in the centre of a group. He stands, while a genius is unfurling a flag and flying forward above his head, and the soldiers around him are inspired with renewed courage at the sound of his voice. One of them, who had dropped his sword, is in the act of picking it up. At the summit is a female figure symbolising the Republic, seated on a lion, and holding in its hand the Declaration of the Rights of Man. Long extracts from Gambetta's speeches will be engraved on the base. The monument will be erected in the Place du Carrousel, between the two wings of the Louvre. The jury also awarded a prize of 6,000 frs. to the model exhibited by M. Dalou and M. Faure Dujarrie. The second prize of 4,000 frs. was carried off by M. Falguière and M. Pujol, and awards of 2,000 frs. each were given to M. Allard and M. Dutert, M. Coutan and M. Lambert, and M. Injalbert and M. Laloux. The exhibition of the models at the Ecole des Beaux-Arts will remain open till December 2.

### THE GREEK TREASURE TROVE CASE.

THE case of the three Greeks who were in possession of two pieces of sculpture contrary to the laws of Greece (see *The Architect*, Nov. 8) was again heard at the Thames Police Court on Tuesday. Mr. St. John Wontner, who represented the Greek Government, said he attended in the hope that the question of ownership would be decided. The magistrate would remember that information was furnished to the Greek Consul in London that two statues of great value had been brought into this country. The Greek Government were entitled to claim, under the laws of Greece, statues of this description which were found in or had been taken out of the country. When the prisoners were arrested a document was found on one of them relating to a judicial inquiry which was held in Greece with regard to the finding of a statue. From inquiries that had since been made, the Greek Government were quite satisfied that one of the statues found in the possession of these three men was the same concerning which the inquiry had been held. That Government was also satisfied that this particular statue was not an antique one, but of modern make. Such being the case, all claims on the part of the Greek Government now ceased. With regard to the other statue the head was undoubtedly antique, but its value was so small that he was directed by the Greek Government to withdraw all claim to that. Although the case was now ended in this country, the three men would be answerable to the Greek Government on their return to that country for taking away the statue. According to Greek law, supposing they did not intend to return, their property, which each one of the three men possessed in Greece, would be made to answer the charge. Under these circumstances he would ask the magistrate to order the restitution of the statues to the three men.—Mr. M. Abrahams said it followed from what Mr. Wontner had stated that the three men had been wrongfully charged with being in the unlawful possession of these things. They had also been kept in prison for seven days, and he might mention that they intended to seek redress from the proper quarter for that unlawful imprisonment.—Mr. Saunders said the only question now for him to decide was what was to become of the statues. He had written an elaborate judgment on the subject in case he should have been called upon to deliver it. However, after what Mr. Wontner had stated, there was now no occasion for him to deliver it. He was quite clear in his own mind that he had a right to order the statues in question to be given up. At the same time he might mention that he quite agreed with Mr. Wontner that they were not genuine antique statues. Although perhaps not a fraud, it was a piece of chicanery on the part of some persons who brought the statues over to England to sell as



genuine antique ones. On referring to the London Police Act, he found a clause especially dealing with this subject, by which it was quite clear to his mind that the officers of justice had things merely placed in their custody pending the direction of the court. It had been said that the statues were worth 15,000*l.* That might be so, but all he could say was that he should not like to give that sum for them. He should now make an order for the delivering up of the statues to the three men.—Mr. Abrahams observed that the statues were found by the father of the two farmers, and they were afterwards given them by their mother as a portion of their inheritance.

### LIABILITY OF SANITARY ASSOCIATIONS.

**A**N action was brought some time ago by Mr. Ainslie, of Elvingston, Haddington, against the Sanitary Protection Association of Edinburgh, to recover 500*l.* damages for depreciation of his property. Mr. Ainslie in the early part of the year entered into negotiations for letting on lease his mansion-house of Huntington; and while these negotiations were going on the house was visited by Mr. Thomson as one of the engineers of the Sanitary Association, and its drainage and water storage arrangements inspected without Mr. Ainslie's consent having been asked or obtained by the defenders. He contended that the whole inspection was hasty and careless, and stated that a communication on the subject had been made to the party who was negotiating with him for a lease of the house, which had the effect of greatly depreciating the value of the property, besides putting him to considerable expense. The defendants maintained that, as the plaintiff had had sanitary defects remedied in the house since the inspection, so far from sustaining loss by reason of the examination and report, he had substantially benefited thereby, and stated that, since the sanitary arrangements were improved, a lease has been taken of the mansion-house for five years. The defendants further contended, in their second plea of law, that the plaintiff's statements were irrelevant, and insufficient to support the prayer of the petition. The Sheriff-Substitute sustained this second plea, dismissed the action, and found the plaintiff liable for costs. An appeal was subsequently taken to the Sheriff-Principal, and Sheriff Davidson has now dismissed the appeal, and found the plaintiff liable for additional costs. In the course of a note his lordship says:—"The case is not now being dealt with on its merits, but it may be observed that, even on the pursuer's statements, the place could hardly have received a better character and certificate than from the report of Mr. Thomson, followed, as the Sheriff was informed, by the execution of the works which he recommended. The pursuer is fortunate in the case being arrested before further expense is incurred."



### The Architectural Diploma.

SIR,—I think Mr. Mardon Mowbray's suggestion of a memorial to the Institute hereon, as expounded in *The Architect* of Nov. 8, is one which should meet with the support of all architects desirous of maintaining the dignity of their profession. Undoubtedly every architect should possess a diploma of efficiency, and illiterate and unqualified persons be debarred by legislature from practising, and (only too frequently) bringing dishonour on the profession.

The Institute should have power to confer diplomas at once, not only on its own members, but on all architects who have been in independent practice for a certain number of years; and, for the future, let the embryo architect (1) give evidence, before entering his articles, of his having received a good general education; (2) let him be articled in the usual way for a term of five years, and at the expiration of say three years of that time let him be required to pass an elementary examination in architecture; and (3) at the completion of his articles let him pass his "final" examination (framed possibly on the lines of the present obligatory examination of the Institute), and receive his diploma of competency to practice.

Yours faithfully,

ALFRED W. CROSS, A.R.I.B.A.

Memorial Buildings, Hastings:  
Nov. 13, 1884.

### Awards for Ventilators at the Health Exhibition.

SIR,—In reply to Mr. Clark's letter *re* the above, which appeared in your current issue, we have only to repeat that we were *not* invited to send our air-pump ventilator, which is the only exhaust ventilator we either manufacture or sell, for the purpose of being tested, nor were we notified that tests were being made with exhaust ventilators; we, as already stated, not being even aware that such tests were instituted until after they were completed and the awards made. Under these circumstances it

seems rather superfluous for Mr. Clark to say that we were *not* excluded from the testing, seeing that we—why, we cannot understand, though we mean to find out—were left in entire ignorance of the existence of such tests. Mr. Clark states that we were invited in *proper* form to send our ventilator to be tested, and also that he holds a letter from us declining to comply with his request. As this is really a matter of not only private but public interest, we now call upon Mr. Clark to publish the letter referred to, so that your readers may be enabled to judge between us, and that we may have the opportunity of showing how we have been treated.

With respect to our error in the length of the testing tube, stating that it was 8 feet, whereas Mr. Clark informs us it was 10 feet long, this additional length instead of improving the position shows all the more conclusively that the mode of testing was a *farce*, and we are prepared to argue this point with Mr. Clark either as a question of science or practice, or as both, and to prove the correctness of our assertions, which we make as practical men of extended experience. From the accounts we have since read of the experiments, and the manner in which they were conducted, we much fear that they will have the effect of bringing sanitary science into discredit with the public, and do it almost as great an injury as the notorious "Kew experiments," which is greatly to be regretted, as it retards and hampers the efforts which earnest and practical men are now making to popularise the cause amongst the people.

We derived the information from a credible source that the shafts of the ventilators tested were *inside* the tube, but as Mr. Clark affirms, and we have no knowledge of ourselves to the contrary that such was not the case, we will concede the point, which does not affect materially the method of testing the ventilators.

As we in the whole course of our experience as ventilating engineers have never heard mention of Mr. Clark as an authority on ventilation, it might, as indicating the value to be attached to that gentleman's labours, be satisfactory to your readers, as it certainly would be to us, to be informed of his qualifications to decide a question relating to ventilation in such an offhand manner, which has hitherto baffled the most scientific and practical experts on the subject, *viz.*, the determining by *scientific experiment* the relative values of ventilating cowls. We would strongly recommend Mr. Clark, and all others who feel inclined to dabble in such experiments (?), to carefully read and digest the article on "Cowl Testing" which appeared in your issue of the 1st inst., and if they then do not see the fallacy of their attempts to solve what is practically as difficult a problem as squaring the circle, we fear their case is hopeless.

Mr. Clark stigmatises part of our letter as "abusive." If stating that we will not allow this matter to drop until we have sifted it to the bottom, and discovered the individual or individuals really to blame is "abuse," then we admit the impeachment; or if our remark that the experiments in question are a reflection on the intelligence of the nineteenth century be considered "abuse," then we again admit the impeachment.

In view of Mr. Clark replying to this letter, we beg to ask him one question, and that is, if Mr. J. P. Seddon, architect, who, we are informed by the secretary to the juries, formed one of the jury on ventilation, is a friend of his, or if he is personally acquainted with that gentleman? Your readers will doubtless comprehend our reasons for asking this question.

As we presume we may look upon Mr. Clark's letter as a final reply, so far as the jury are concerned, to our letter of protest addressed to Sir Philip Cunliffe-Owen in his capacity of official representative of the jury, and receipt of which that gentleman duly acknowledged, we herewith beg to append that letter as showing how the matter stands.

Queen Anne's Buildings, 64 Holborn Viaduct,  
London, E.C.: Nov. 4, 1884.

To Sir Philip Cunliffe-Owen, Secretary to the late Health Exhibition,  
South Kensington.

DEAR SIR,—We are informed, and for the first time, that the exhaust-ventilators exhibited at the late Health Exhibition, South Kensington, have been submitted by the jury to a series of tests, with the view of ascertaining which was the best and entitled to the first prize. As we received no notification that such tests were going to be made, nor were we invited to submit our self-acting air-pump ventilator, exhibited at the Health Exhibition, for the purpose of being tested along with the others, we beg to ask you, as the representative of the jury, for an explanation of the omission, and the reason for our ventilator being excluded.

We have also to ask you if it is correct that Mr. J. P. Seddon, architect, formed one of the jury on ventilation, and that five medals have been awarded to the ventilating and sanitary appliances of a firm which that gentleman has been the public advocate of for these last seven years, he being also well known to be strongly antagonistic to us personally and to our ventilating arrangements?

During the time of the exhibition we repeatedly attempted to ascertain the names of the jury; but, for reasons best known to that body, none of their names were allowed to be divulged—an unprecedented proceeding and entirely contrary to the recognised rules which control all exhibition juries. We beg to remark, however, that in England men do not submit to be condemned by secret tribunals without even having been brought to trial, as is the case with us in the present instance.

We would also like to know why the jury have awarded us a silver



medal for an appliance which we did not exhibit at all, namely, our system of ventilation for drains? The limited space granted us prevented us from doing so.

We beg also to ask if the official list of awards as published in the *London Gazette* correctly represents the value and number of the prizes awarded to each exhibitor, as we observe a paragraph in this week's issue of the *Building News* which states that Mr. W. P. Buchan, a plumber in Glasgow, has been awarded a gold medal, whereas in the list he is shown as having only received a second prize (silver medal) for traps and the lowest prize (bronze medal) for ventilators?

Enclosing a pamphlet containing the notorious Seddon correspondence re the application of our system of ventilation to the London Custom House, and hoping to be favoured with an early reply to the foregoing queries,

We have the honour to be,

Your obedient servants,

(Signed)

ROBERT BOYLE & SON.

P.S.—We beg formally to protest against the awards given for ventilators, on the grounds that our self-acting air-pump ventilator was not tested, and that we were not invited to submit it for the purpose of being tested along with the others, and that therefore the awards given do not show that the ventilators receiving them were just'y entitled to them.

R. B. & S.

As it is evident, from the position Mr. Clark has taken up, that the above letter has failed in its purpose, and that we may expect but scant satisfaction at the hands of the gentlemen—whoever they may be—who formed the jury, we will now appeal to the executive through its head, His Grace the Duke of Buckingham.

Our letter to Mr. Clark will be a partial reply to Mr. Banner's, which appeared in your current issue. We have now to say that, had we known at the time that Mr. J. P. Seddon formed one of the jury on ventilation, we should have lodged a formal protest against his acting in that capacity, on the grounds that he was declaredly antagonistic to us, and that he was also the advocate of another system of ventilation (Mr. Banner's), upon which he would also have to adjudicate. Had we been invited to send our air-pump ventilator for the purpose of being tested, which we were not, and had we been aware that Mr. Seddon was one of the jury, we should most certainly have declined; and it has yet to be explained why the names of the jurors were kept so strictly secret in spite of all our attempts to ascertain them.

With respect to the value of the tests, we have already, through the medium of your columns, expressed our opinion, and that opinion we not only maintain but are prepared to prove is correct. As to the efficiency of Mr. Banner's or any other ventilator as compared with the air-pump ventilator, there is no surer or more crucial test than the test of time, and no better judge than the public. It is not for us to boast of how long our ventilators have now been in use, nor of the number of buildings, public and private in almost every country in the world, which we have successfully ventilated, nor of the almost incredibly large number of ventilators which we have sold during the last fourteen years. The fact that they are known and extensively used in every quarter of the globe is in itself, we think any reasonable and unbiassed person will admit, sufficient proof that the air-pump ventilators have been found to satisfactorily answer their purpose, or they would not have been so generally adopted. But that is not all. We recently made an appeal to the principal architects in the United Kingdom, to be favoured with their experiences of our ventilating appliances, and we received, in *immediate response*, over four hundred most valuable testimonials, amongst which are to be found the names of almost every leading architect in the kingdom. We humbly think that the testimony of gentlemen who all speak from extended practical experience, such as Mr. Arthur W. Blomfield, Mr. Arthur Cates, the late Sir Gilbert Scott, Sir William Thompson, Dr. B. W. Richardson, the late Professor Macquorn Rankin, &c., &c., will have a little more weight with the public than the pottering experiments of a few amateurs whose ideas on the subject are possibly as vague as their practical knowledge is limited. Mr. Banner is simply making a farce of a serious matter when he again offers his bellicose challenge to "single combat" for 100*l.* a side, &c., &c. Considering that he has now offered this challenge to almost every ventilator maker in the country, and we believe has been also himself challenged, we should have thought that by this time he would have seen the folly of his conduct, and the ridicule he was bringing on the cause of sanitary science by his treatment of it as if were the "prize ring." If Mr. Banner, who, we believe, notwithstanding his pugilistic predilections, to be in his capacity, as a city merchant, a most estimable gentleman, and who must have spent a great deal of money in the indulgence of his hobby, is so very desirous that his name should be handed down to posterity as one of the great sanitary reformers of the present age, let him, instead of giving away his 100*l.* in the way he proposes, expend it in applying his system of ventilation gratuitously to one of our City hospitals or homes, and then invite his friends and the press to witness what he has done. We can assure him that, if he does this, he will accomplish his desire, and at the same time have done a good deed, which will be doubly satisfactory. With respect to Mr. Banner's latest challenge, we have only one thing to say to him in the meantime, and that is to adopt our recommendation to Mr. Clark, and carefully read and digest the article on "Cowl Testing" which appeared in your

issue of the 1st inst. If, after reading that he should still remain in the same frame of mind as he is at present, we will then, with a clear conscience, be in a position to reply further to him.

We are, yours truly,

ROBERT BOYLE & SON.

64 Holborn Viaduct:  
November 15, 1884.

SIR,—Will you spare us a small space for once in your journal in order that we may point out the statements that are likely, unless contradicted, to mislead your many readers, made by Messrs. Banner Brothers & Co. in their letter in *The Architect*, November 15, 1884, pages 324-325, and also to refute their assertions on some other points outside the question of the testing invitations.

We, in short, emphatically deny having any notice or communication from anyone in authority that such test was about to take place, nor did we know anything of it at all until one gentleman, a competitor, came to us. Two questions require answering on this point: first, how is it we were omitted? Considering the exhibit we had (the only one in the whole exhibition which showed ventilation in its practical form) we are making inquiries at headquarters into the matter, and we hope to have explained to us, and to our satisfaction, the cause of such treatment. Can it be said our exhibit was no compliment to the International Health Exhibition, and no notice was required? If so, we must appeal to some of the many who honoured us with their visits, not omitting gentlemen members of the press. Secondly, were Messrs. Banner Bros. assured by anyone in authority that invitations had been sent to all exhibitors to contest? If that is a fact, as stated by them, we not only contradict that assurance, but challenge the truth of it. Therefore it is clear on the face of it Messrs. Banner Bros. have said more than they were justified in doing, or they have been misinformed. Having laid our case before a gentleman of authority and unrelenting energy, we wait with patience his report.

As Messrs. Banner Bros. have called into question the opinion of all ventilator makers, we suppose we must come under that distinguished title. As to the tests, we do not give our opinion in favour of them. We believe that a greater farce was never committed by anyone who took upon himself to act in such a capacity, and if Messrs. Banner Bros. are the great authorities in ventilation they assume, surely they must confess their ventilator, with the elaborate construction and working parts, cannot be of much account, considering they were beaten by at least two, with no working parts at all, the one a chimney-top, the other a simple 9-inch tube, with two cones outside for the wind or air to act upon, which could have no effect when tested, for the reason that the testing was carried out in a room; and we give it as our unbiassed opinion, under such circumstances, no other result could have been expected, and we will now give in detail a few remarks in justification of our opinion, and leave them to be contradicted by anyone who is able.

All fixed or rotating cowls or ventilators are represented as being automatic. If a visit is made to Messrs. Banner Bros.' stand, and an explanation is asked, it will be the wind or air acts so and so, which causes the ventilator to act so and so. Take the one that claims the highest award for fixed or roof ventilators (the silver medal), because the maker asserts that the winner of the gold medal obtained it for an Albert chimney-top. His is a plain, open tube, with cones outside for the wind to play upon, causing an induced current. This is his exact description when explaining it, and so it is with every one. Atmospheric agency is what is relied upon. At any rate, so it is declared by the recipients of awards. Take the system applied in the testing, called the correct one, and see if the atmosphere had anything to do with the merits of the ventilators so fortunate. We say it had not, and, scientifically, we shall be uncontradicted, for the reason that all the results were brought about by a forced current. Thus, it is quite clear that Messrs. Banners' cowl would be better without any parts at all except the repeat shaft. If their judgment is correct as to the method of testing, could the result be otherwise? Take, for instance, a 9-inch tube, with 500 cube feet of air being forced through it every minute; take another, with the same amount of pressure, place a straw or anything else that occupies space, and the result must be different; hence it is, What value is there in fittings or appliances to a ventilator, against one without any, particularly under such a method of testing as before named? If Messrs. Banner Bros. are right, and we are wrong, the ventilating engineering profession will seem to be a thing of the past, as any one can have a perfect ventilator by taking an old hat with the crown out. What is to beat it? There you have a clear circumference the size of the hat, and no obstruction to the forced current by any internal appliances that are so frequently (and not without profit) used. We could most unquestionably give many other reasons why we differ from Messrs. Banner Bros., and also why we consider the test so applied does not give the relative merits of a ventilator, and the result of such tests are calculated to seriously mislead the public, who have had no opportunity of seeing the various ventilators that are in the market, and more especially because the testing was carried out by an authority



connected with the International Health Exhibition of 1884. Considering the importance of the exhibition, the benefit that not only exhibitors but the outside world expected to derive from the exhibits and the verdict of the judges, they should have been such as to have given reasonable satisfaction. If Messrs. Banner Bros. are correct in stating that Messrs. Robert Boyle & Son were invited, and there is documentary evidence to prove it, and Messrs. Robert Boyle & Son publicly declare they had not an invitation, we ourselves declare we had no invitation. Messrs. Banner Bros. inquired—and we suppose of the proper authorities—if all had been invited, and were assured they had. It is for your readers to be informed where this tremendous discrepancy lies. As far as we are concerned, we hope Messrs. Banner Bros. rather misunderstood the reply to their inquiries. If not a responsibility rests upon someone, who will best vindicate their actions by an announcement open to your readers. We hope you will excuse the length of our letter, and favour us with space for the purpose of setting forth a true state of the case as far as we are concerned.

2 Elmhurst, Upton Lane, Upton, E.: Yours truly,  
November 19, 1884. EDGAR ALDOUS & SONS.

SIR,—I beg to express my regret that there should have been any reason for Messrs. Robert Boyle & Son writing as they do. They complain of not being asked to send in their ventilator to be tested along with the "select" number that have been tested. Now I complain of being put to the expense of sending one of my ventilators all the way from Glasgow specially to be tested, and of no proper testing being made. This is not the first time I have made this complaint, however, as owing to being up in London at the Plumbers' Congress at the International Health Exhibition on October 20, I called at the room where the "testing" was being made on the morning of the 21st ult., and from what I saw I considered the mode of testing quite useless, and therefore wrote a letter that same evening objecting to the tests, which letter was received by the secretary of the exhibition on October 23, some days before the awards were published, and before I knew how my ventilator exhibits were to be judged.

The pseudo-testing of the ventilators, so far as I saw, was made in a (for the purpose) small room 12 feet high and about 22 feet long and 18 feet wide, with window extending fully 3 feet further. For testing, two fans were used with 8½-inch diameter outlets, each being worked by a man turning a handle or crank, just as if turning a grindstone. These fans were set on a table several feet above the floor, and delivered the air from them into a wooden tube 10 feet long, the nearest end of tube to fans being about 3 feet back from fans, which caused the other end of the tube to be only about 5 feet distant from the solid wall. The tube was nearly square in section at end next the fans, being 3 feet high and 2 feet 6 inches wide. At the end furthest from the fans the tube was 5 feet high.

The ventilator being tested rested on the bottom of the wooden tube, which latter had a hole cut in its bottom below the pipe of the ventilator, to allow the air in and the application of the anemometer. The size of the tube was much too small, while its distance from the solid wall was far too little. Instead of only being five feet from the wall, it should have been about five times five. As it was, the artificial wind could not get forwards to the front of my ventilator, but was deflected off at each side and also over the top. The volume of wind produced by the fans was too little, and the size of wind tube too little also for my 22-inch ventilator.

We were asked to send in a ventilator for a 9-inch pipe, without any information as to how the testing was to be made, &c., and I concluded to let my 22-inch one take its chance.

With the testing, as conducted, I would have had a better chance with a small 15-inch ventilator and a tapered pipe than a 22-inch one. One might as well set a six-days' Atlantic liner to run a race with a tug-boat in a farmer's duck-pond as test one of my 22-inch ventilators in a small room, as above described.

It would be very interesting to know the comparative results given with the above style of testing, as then any two "tested" in the room could now be properly tested by exposure to the wind above a roof. I intend to have this done with Messrs. Banner & Kite's as soon as I can manage it, and publish the results. At the same time, I consider that injustice has been done to all the exhibitors of ventilators by the testing being attempted—I cannot say carried out—as described, while the public, in my opinion, are liable to be misled. The judges have awarded to my ventilating exhibits a bronze medal for exhaust ventilators, but if any higher award has been given for *exhaust* ventilators *per se* to any other exhibitor, I beg to openly protest against it.

I am, &c.,  
W. P. BUCHAN.

[This letter was held over from last week in consequence of the length of other letters.]

**The First Stone** of the West Ham Police-court, Stratford, E., was laid on the 12th inst. by Mr. G. Rivett, Chairman of the Local Board. Mr. Lewis Angell, F.R.I.B.A., is the architect, and Messrs. M. A. Palmer & Sons the builders.

## GENERAL.

**An Exhibition** of the works of M. Jan Van Beers, the painter, is now open at the Cercle Artistique, Brussels. The King of the Belgians lately spent two hours in the gallery.

**The Winter Exhibition** of the Birmingham Art Circle opened on Monday.

**M. Gérôme** has obtained a commission from the King of the Belgians for a large picture representing the inauguration of the statue of *William II.* at Luxembourg.

**The Wolverhampton Art Gallery** has been reopened, and contains the loan collection of pictures shown at the lately-closed exhibition.

**The New Gallery in the British Museum** containing the sculptures of the Mausoleum is now open to the public.

**Mr. H. H. Armstead, R.A.**, has obtained the commission for the statue of Lieutenant Waghorn, the pioneer of the Overland Route, which is to be erected at Chatham.

**The Museum of Carcassonne** has been presented with the cartoon for the large picture by M. Cormon, *Return from a Bear Hunt in the Stone Age*, which was exhibited in this year's Salon.

**Mr. George A. Lawson, Sculptor**, has been elected an honorary member of the Royal Scottish Academy.

**A Social Meeting** in connection with the Midland Arts Club, Birmingham, was held on Wednesday evening. Among the works of art exhibited was a fine Gainsborough portrait of *John Wilkes, Lord Mayor of London*, lent by Mr. William Henman. Mr. J. A. Cossins showed his design of the Liberal Club, and Messrs. Henman & Timmins their design of the Conservative Club, and a seal of the Guild of the Holy Cross, date 1345, was lent by Mr. Joseph Hill.

**M. Chaplin** has been invited by the Comte de Paris to spend some time at the Château d'Eu, in order to paint portraits of the young princesses.

**The Death** is announced of Mr. Frederick William Hulme, the landscape painter. The artist, who was a Yorkshireman by birth, settled in London about forty years ago, since which time he has been a regular exhibitor at the Royal Academy and the British Institution. His principal works were *The Close of Day*, *Sermons in Stones*, and *Rest*, respectively exhibited at the Royal Academy in 1870, 1873, and 1874.

**A Society of French Artists** is about to be formed, which is to have for its end the emancipation of French art from "the oppression of juries."

**A Fund** for the restoration of Audlem Church has been started. The proposed work is estimated to cost about 3,000*l.*

**A Memorial Communion Table**, designed by Messrs. Chorley & Connon, of Leeds, has been placed in Millhill Chapel, Leeds, by the widow of the late Alderman J. D. Luccock. The table is of oak and walnut, elaborately panelled, and is the work of Mr. J. W. Appleyard, of Leeds. The panels are of enamel mosaic, the figures being in colour on a gold ground, done by Mr. A. Cappello, of Chelsea.

**M. Ernest Renan** has been elected an honorary member of the Society of French Antiquaries, which was founded in 1829. It consists of forty-five members and ten honorary members, and the meetings are held in the Louvre.

**Plans** have been prepared by Mr. Cundall, of Leamington, for the erection of a parish building in connection with the church of St. Nicholas, Warwick. The cost is estimated at about 1,400*l.*

**Acting** on the recommendation of the Works Committee, the Metropolitan Board of Works have decided to apply to Parliament for power to construct two steam ferries across the Thames at Woolwich and Greenwich. The cost of the ferries is put down at 350,000*l.*

**King Charles of Roumania** has given an order to MM. Damon & Cie., of Paris, for the decoration and furnishing of the new palace at Bucharest.

**The Marquis of Bute** has arranged to sell the Bute Docks at Cardiff, with the railways and rolling stock, to the Taff Vale Railway Company. The value of the property is about 3,000,000*l.*

**The Railway Station at Gloucester** is to be enlarged. It will be necessary to remove the goods shed and lines further east, which will be a work of considerable magnitude.

**Professor Carl Vogt, the Naturalist**, has lent for exhibition to the Athenæum of Geneva, several of the oil pictures painted by himself, and comprising Alpine landscapes, hunting scenes, &c.

**Mr. William M'Ewan**, of Edinburgh, has promised to contribute 5,000*l.* for the internal finishing and equipment of the new University Buildings, on condition that 10,000*l.* will also be subscribed by Michaelmas 1885.

**The Gaiety Theatre** at Southampton was destroyed by fire on Wednesday morning.

**"Richard II."** has been produced at the Theatre Royal, Berlin, in a magnificent style. The scenery was arranged by Herr Eichelhäuser. Schlegel's translation of Shakespeare's tragedy has been adopted.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, NOVEMBER 22, 1884.

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Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.

### TENDERS, ETC.

As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.

Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—  
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### COMPETITIONS OPEN.

KING'S NORTON.—Dec. 15.—Plans for the Erection of Four Cottage Homes upon Lands situate at Shenley Fields are required. Mr. Ralph Docker, Clerk of King's Norton Union, Colmore Row, Birmingham.

### CONTRACTS OPEN.

ACTON.—Dec. 2.—For Construction of (Contracts 1 to 5) Main Sewers, Effluent Outfall Sewer to Thames, &c. Mr. C. Nicholson Lailey, Engineer to the Local Board, Acton.

ANNALONG.—Nov. 26.—For Execution of Works at Harbour. Mr. James Gordon, Annalong, County Down.

BANGOR.—Nov. 22.—For Additions to Market Hall. Mr. Henry Kennedy, Architect, Bangor.

BIRKENHEAD.—Nov. 28.—For Laying Pipe Sewers and Forming Street. Mr. T. C. Thorburn, C.E., Borough Surveyor, 35 Hamilton Square, Birkenhead.

BEXLEY.—Nov. 26.—For Construction of Pipe Sewer (2,240 feet). Mr. E. Reeve Bonter, Bexley Heath.

BISHOP AUCKLAND.—Nov. 26.—For Supply of Salt-glazed Socketed Drain Pipes (530 yards). Mr. Johnson, Craddock Street, Bishop Auckland.

BOLTON.—Dec. 2.—For Widening and Reconstructing Church Bank Bridge. Borough Surveyor, Town Hall, Bolton.

CARLINGFORD.—Dec. 3.—For Execution of Works at Harbour. Mr. W. C. Browne, Carlingford.

CHESTER.—Nov. 29.—For Building Museum, Science and Art Schools. Mr. T. M. Lockwood, Architect, 80 Forcgate Street, Chester.

DUBLIN.—Dec. 26.—For Building Bath Rooms and Water Closets at Workhouse. Mr. Byrne, Architect, 52 Dame Street, Dublin.

DUNDEE.—Nov. 28.—For Enlargement of Dudhope School. Mr. David Mac'aren, Architect, 51 Murraygate, Dundee.

DURBAN.—Dec. 15.—For Supply of Cast-iron Water Pipes (1,000 tons), &c. South African Mercantile Agency, 9 King William Street, E.C.

ELLAND.—Dec. 2.—For Building Police Station. Mr. J. Vickers Edwards, West Riding Surveyor, Wakefield.

GALWAY.—Nov. 22.—For Construction of Lavatories, Closets, Hot Baths, and Alterations at County Club House. Mr. Edward Townsend, C.E., Galway.

GOLCAR.—Nov. 24.—For Building Villa. Mr. J. H. Hall, Architect, Fartown, Huddersfield.

GREAT EASTERN RAILWAY.—Dec. 1.—For Works and General Repairs and Alterations for 1885. Mr. John Wilson, Engineer, Liverpool Street Station.

GREAT YARMOUTH.—Nov. 25.—For Building Cottage. Mr. C. G. Baker, Architect, St. George's Plain, Great Yarmouth.

HACKNEY.—Nov. 27.—For Construction of Brick Sewers (20,950 feet). Sir J. Bazalgette, Engineer, Metropolitan Board of Works, Spring Gardens, S.W.

HALIFAX.—Dec. 5.—For Building Board Schools at Cross Hills. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

KENDAL.—Dec. 2.—For Building House. Mr. J. Bintlley, Architect, 7 Lowther Street, Kendal.

KNOCK.—For Building House, Shop, and Cottages. Mr. J. C. Marsh, Architect, 107 Donegal Street, Belfast.

LIMERICK.—Dec. 4.—For Building Schools. Messrs Nash & Son, 85 George Street, Limerick.

LINDSEY.—Nov. 24.—For Building Junior Department at Oakes Schools. Mr. Ben Stocks, 7 Union Bank Yard, New Street, Huddersfield.

LIVERPOOL.—Nov. 24.—For Fittings for Sorting Office and Instrument Room, Head Post Office. Clerk of Works, Post Office, Liverpool.

LONDON.—Nov. 24.—For Ordinary Works and Repairs to Public Buildings, Hampton Court, Kew, and Richmond District, for 1885. H.M. Office of Works, 12 Whitehall Place, S.W.

NEWCASTLE-ON-TYNE.—Nov. 22.—For Building Government Offices. Clerk of Works, Post Office, Newcastle-on-Tyne.

NEWCASTLE-ON-TYNE.—For Building Tobacco Manufactory, Bath Lane. Mr. Edward Shewbrooks, Architect, 2 Market Street, Newcastle-on-Tyne.

NEWRY.—Dec. 10.—For Excavating Channel between Newry River and Carlingford Lough. Mr. J. Barton, C.E., Exchange Buildings, Dundalk.

OPORTO.—Dec. 15.—For Construction of Covered Market. Senhor J. A. Correa de Barros, President of the Municipal Board of Oporto, Portugal.

PLYMOUTH.—Nov. 24.—For Construction of a 13-inch Pipe Sewer with Stoneware Pipes or Concrete Tubes. Mr. G. D. Bellamy, Borough Engineer, Municipal Offices, Plymouth.

SEDBERGH.—Dec. 1.—For Restoring Parish Church. Mr. W. Wright, Surveyor, Lancaster.

SPITAL.—Dec. 8.—For Building Dwelling-house on Farm. Mr. Williams Brims, Architect, Wick.

STOCKPORT.—For Construction of Pipe Sewer (97 yards). Mr. E. Sykes, Surveyor, Union Offices, Stockport.

WIDNES.—Dec. 1.—For Reconstruction of Brick Culverts. Mr. Copland, Engineer to the Local Board, Widnes.

WOODBURY DOWN.—Dec. 8.—For Building Police Station. Office of the Receiver, 4 Whitehall Place, S.W.

### TENDERS.

#### ACCRINGTON.

For Sewerage Works, Accrington (Contract No. 5). Mr. E. Knowles, Borough Engineer.	
R. Lomax, Eccles	£4,628 0 0
Parkinson, Blackburn	4,000 0 0
Dawson, Bury	3,697 0 0
R. Lomax, Eccles	3,543 17 8
Ramsbottom & Son, Accrington	3,240 0 0
Fawkes Bros., Southport	3,206 12 11
Sharples, Accrington	2,946 5 11
ORRELL & SONS, Darwen (accepted)	2,616 6 9

#### BRISTOL.

For Conversion of Large Building into a 50-quarter Malting, for Messrs. Arnold & Co, Wickwar, Bristol. Mr. WM. BRADFORD, Architect, 12 Regent Street, London. Quantities not supplied.	
Davis, Bristol	£1,930 0 0
King, Gloucester	1,837 0 0
James, Bristol	1,699 0 0
ROACH & SONS, Chalfield (accepted)	1,712 0 0

Ironwork.

GODDARD & MASSEY, Nottingham (accepted).

#### BOURNEMOUTH.

For Building Villa, Poole Road, Bournemouth, for Miss Newton. Mr. H. E. HAWKER, Architect.	
Cox (accepted)	£1,300 0 0

#### CASTLEFORD.

For Additions and Alterations to Red Hill House, Castleford, for Mr. John Austin, J.P. Messrs. WM. LEWIS & SON, Architects and Surveyors, 46½ Stonegate, York.

Hughes, York.

#### COCKERMOUTH.

For Rebuilding Brewery, Cockermouth. Mr. R. S. MARSBY, Architect.	
Armstrong, joiner	£130 0 0
Borrowdale, builder and slater	100 0 0
Altringham, plasterer	26 0 0
Davis, painter and glazier	9 9 0

All of Cockermouth.

Iron Girders and Rolled Joists.

McClallen, Glasgow.

#### COLCHESTER.

For Building Branch Stores on New Town Estate for the Colchester and East Essex Co-operative Society. Mr. JAMES F. GOODEY, Architect.

Everett & Son	£990 0 0
Dobson	978 0 0
Diss	968 0 0
Dupont	935 0 0
Oldridge	909 0 0
Lee	898 0 0
Chambers	895 0 0
Ambrose	836 0 0
Eade	810 0 0
Gladwell	795 0 0



## CYMMER.

For Building School at Cymmer, for the Glyncoirwyg School Board. Mr. A. H. BATCHELOR, Architect, Cardiff. Quantities by the Architect.  
Lloyd, Cymmer, near Maesteg . . . £1,099 0 0

## DELPH.

For Building Branch Bank at Delph, near Oldham, for the Manchester and County Bank. Messrs. J. LAWTON & SONS, Architects, St. Chad's, Uppermill, Oldham.

## Accepted Tenders.

Hinchliffe, Uppermill, mason . . . £1,366 0 0  
Hewkin & Bros., Greenfield, joiner . . . 645 0 0  
J. Whitehead, Dobcross, plumber . . . 148 0 0  
B. & H. Whitehead, Dobcross, plasterer . . . 63 0 0  
Mellor, Wallhill, slater . . . 47 0 0  
Platt, Uppermill, painter . . . 35 0 0

Total . . . £2,304 0 0

## DUNDALK.

For Construction of Waterworks, Dundalk.  
M-Farland, Westminster . . . £24,500 0 0  
Swiney & McLarnon, Belfast . . . 24,375 1 5  
Walkden & Co., Liverpool . . . 24,328 3 8  
Brown & Young, Glasgow . . . 24,010 1 8  
Osborne & Pearson, Kilmarnock . . . 23,921 17 9  
Ross & McArdrey, Belfast & Dundalk . . . 23,485 0 0  
SMITHSON, Dublin (accepted) . . . 22,992 13 8  
Ten other tenders were received ranging from 25,000l. to 38,376l.

## EAST GRINSTEAD.

For the Erection of Aerated Water Manufactory. Mr. S. W. HAUGHTON, Architect, East Grinstead.  
Godly, East Grinstead . . . £203 6 0  
Quickenden, East Grinstead . . . 180 0 0  
Pledge, East Grinstead . . . 175 10 0  
Charwood Bros., East Grinstead . . . 165 0 0  
Morris, Ashurst Wood . . . 160 0 0  
BEARD, East Grinstead (accepted) . . . 146 0 0  
For the Enlargement of the East Grinstead Dispensary. Mr. S. W. HAUGHTON, Architect, East Grinstead.  
PLEDGE, East Grinstead (accepted) . . . £117 1 0

## FLINT.

For Alterations and Additions to Town Hall, Flint. Mr. LOCKWOOD, Architect, Chester.  
HUGHES, Alford (accepted) . . . £890 0 0  
Stone Staircase . . . 75 0 0  
HUGHES (accepted) . . . 75 0 0

## FOXFORD.

For Ventilating Schools at Foxford.  
Haywood, jun., Coventry . . . £105 0 0  
Lester, Coventry . . . 87 0 0  
GOODE, Foxford (accepted) . . . 83 0 0

## GOSFORTH.

For Construction of Sewer, with Manholes, Ventilating Shafts, &c., South Gosforth. Mr. C. J. BAFF, Surveyor.  
Alexander, Gosforth . . . £308 9 11  
Gordon & Smith, Gosforth . . . 225 9 5  
Elliott, Sunderland . . . 218 17 1  
Middlemas Bros., Newcastle . . . 218 14 6  
Keegan & Keenan, Newcastle . . . 211 8 2  
Turner, Newcastle . . . 207 5 2  
ROBSON, Newcastle (accepted) . . . 200 2 3  
Craigs, Gateshead . . . 199 18 4  
Stockoe, Fence Houses . . . 196 7 8  
Tangton & Sedgwick, Dipton . . . 195 15 0  
Carr, Hexham . . . 195 5 1  
W. & M. Young, Jarrow . . . 191 6 7  
Dixon, Fence Houses . . . 188 10 6  
Simpson, Newcastle . . . 187 14 2  
Tyrle, Gateshead . . . 186 5 3

## GREAT YARMOUTH.

For Carpenter's and Joiner's, Plumber's, Glazier's, and Painter's Work to Shop Front, King Street, for Mr. B. Thompson. Mr. C. G. BAKER, Architect.  
Salmon . . . £105 0 0  
Barnard . . . 104 10 0  
Want . . . 92 5 0  
Cooper . . . 89 15 0  
Cork & Beech . . . 89 8 6  
Rand & Cooper . . . 79 15 0  
All of Great Yarmouth.

## GREENWICH.

For Rebuilding 35 and 37 Church Street, Greenwich, for Mr. W. B. Blackman. Mr. R. W. CRAWLEY, Architect. Quantities supplied by Messrs. Hills & Fletcher.  
Forrest . . . £1,994 0 0  
Jarrard . . . 1,990 0 0  
Hall . . . 1,875 0 0  
Redman . . . 1,825 0 0  
A. & F. Smith . . . 1,754 0 0  
Hubble & Trott . . . 1,749 0 0  
HOLLOWAY (accepted) . . . 1,747 0 0

## HULL.

For Sinking Four Artesian Bores at Springhead Pumping Station, Hull. Mr. D. MAXWELL, Engineer.  
Vivian & Co., Whitehaven . . . £3,400 0 0  
Fennell, Leytonstone, Hull . . . 2,623 0 0  
Tilley & Sons, London . . . 1,997 11 0  
Batchelor, Luton, Kent . . . 1,800 0 0  
Villiers, Beverley . . . 1,600 0 0  
SMALLEY, Hull (accepted) . . . 1,080 0 0  
Speck & Co., Hull . . . 955 0 0

## LEWISHAM.

For Alterations at the Black Bull Public-house, Lewisham, for Mr. G. Shaw. Mr. H. T. BONNER, Architect.  
HOLLOWAY (accepted) . . . £975 0 0

## HUDDERSFIELD.

For Building Junior Department, Mount Pleasant Schools.  
Lockwood, Huddersfield.  
Moorhouse & Sons, mason . . . £2,890 0 0  
Wood Bros., joiner . . . 1,117 0 0  
Mellor & Crowther, plumber . . . 347 0 0  
Calvert & Co., hot-water . . . 332 0 0  
Pickles Bros., tiler . . . 291 10 0  
Heaps & Co., ironwork . . . 235 0 0  
Longbottom & Sons, plasterer . . . 106 0 0  
Bevers, painter . . . 65 0 0

## JARROW.

For Paving and Channelling at High Street and Hope Street, also for Excavating and Bottoming Don Street, Hope Street, and Derby Street, for the Sanitary Authority. Mr. J. PETREE, Borough Surveyor, Jarrow.  
McKay . . . £530 10 10  
Adams . . . 453 1 1  
Scott . . . 346 0 0  
Maughan . . . 328 13 8  
CALLAGHAN (accepted) . . . 326 14 0  
All of Jarrow.

## KING'S LYNN.

For Building Stables, Provender Stores, &c., King's Lynn. Mr. E. G. MAWBEY, Architect. Quantities by Borough Engineer.  
Brown . . . £1,291 12 3  
Lofts & Sons . . . 1,229 7 4  
Bennett Bros. . . . 1,114 8 9  
Fayers . . . 1,110 18 7  
Leach, jun. . . . 1,106 13 7  
Thing & Spragg . . . 1,059 7 8  
Foreman . . . 1,049 0 0  
Dye . . . 1,045 16 1  
Daves . . . 1,015 0 0  
BARDELL Bros. (accepted) . . . 995 0 0  
Architect's estimate . . . 997 0 0

## LEICESTER.

For Construction of Main and Storm Overflow Sewers, Dame Hill District, Leicester. Quantities by Mr. J. Gordon, Borough Surveyor.  
Stevenson, Eckington . . . £5,548 11 10  
Nash, London . . . 4,580 0 0  
Ward, Leicester . . . 4,500 0 0  
Russell & Co., Eltham . . . 4,165 0 0  
Bottoms Bros., London . . . 3,912 0 0  
Pilling & Co., Leicester . . . 3,580 17 10  
Dickson, St. Albans . . . 3,542 14 10  
Allengame, Harborne . . . 3,401 4 10  
Cook & Co., London . . . 3,873 0 0  
Bentley, Lee, Kent . . . 3,331 12 4  
Small & Sons, West Bromwich . . . 3,287 12 4  
Cook, Bennett & Thew, Spalding . . . 3,274 19 9  
Munson & Co., Loughborough . . . 3,059 6 4  
Palmer, Birmingham . . . 2,990 1 2  
SMART, Nottingham (accepted) . . . 2,848 12 4

## LONDON.

For Alterations to Windows, &c., at Ingram House, Fenchurch Street, E.C., for Messrs. Appleton, Machin & Co. Mr. HERBERT D. APPLETON, Architect, 157 Wool Exchange, E.C.  
ROBINSON (accepted) . . . £229 17 6  
For Additional Storey to Workshops, Great Windmill Street, W., for Mr. J. Barton. Mr. DE NICHOLLS, Architect. Quantities not supplied.  
Burridge . . . £840 0 0  
Rhodes . . . 715 0 0  
H. & E. Lea . . . 675 0 0  
Love . . . 595 0 0

For Shop Fittings and Sanitary Work, 318 Oxford Street, for D. H. Evans & Co. Mr. OWEN LEWIS, Architect. Quantities not supplied.  
Rhodes . . . £150 0 0  
Steel Bros. . . . 142 0 0  
Salter . . . 127 10 0

For Repairs and Decorations, 27 Mortimer Street, Regent Street, for Mr. A. J. Hopkins. Mr. A. J. HOPKINS, Surveyor. Quantities not supplied.  
Burridge & Cullen . . . £99 10 0  
Rhodes . . . 97 0 0  
Hewitt . . . 96 0 0  
Sheerman . . . 94 18 0  
Ashwell . . . 79 0 0

For Office Fittings to Ingram House, Fenchurch Street, E.C., for Messrs. Appleton, Machin & Co. Mr. HERBERT D. APPLETON, Architect, 157 Wool Exchange, E.C.  
A. & J. Sutton . . . £1,664 0 0  
Carter & Co. . . . 1,231 0 0  
DREW & CADMAN<sup>2</sup> . . . 1,150 0 0  
Accepted at £1,125.

For Alterations and Additions to Stable and Coach-house of 9 Seamore Place, Mayfair, for the Hon. A. de Tatton Egerton, M.P. Mr. E. CROSSE, Architect. Quantities by Mr. J. D. Mathews.  
Elvines . . . £1,300 0 0  
Downs . . . 1,198 0 0  
Rhodes . . . 1,180 0 0  
J. & J. Greenwood . . . 1,136 0 0  
Hoare & Son . . . 1,121 0 0  
Higgs & Hill . . . 1,098 0 0  
Higgs . . . 1,050 0 0

For Construction of Pipe Sewers, Penton Place and Eagle Court, Clerkenwell. Mr. WILLIAM IRON, Surveyor.  
Hirst . . . £1,250 0 0  
Linzell . . . 1,160 0 0  
Neave & Son . . . 1,029 0 0  
Walker . . . 917 8 0  
Wilkinson . . . 847 0 0  
Pizzey . . . 743 0 0  
Mowlem & Co. . . . 725 0 0  
Adams . . . 716 0 0  
KILLINGBACK (accepted) . . . 700 0 0

## LONDON—continued.

For New Roof and other Alterations to Warehouse, Bucks Row, Whitechapel, E., for Messrs. S. Schneiders & Son. Mr. JOHN HUDSON, Architect, 80 Leman Street, E.  
Eaton . . . £971 0 0  
Little . . . 924 0 0  
Hosegood . . . 813 0 0  
COULSELL BROS. (accepted) . . . 654 0 0

For Building Factory, Stores, Cellars, &c., Bond Street, Vauxhall, for Barrett's Screw Stopper Bottling Company. Mr. E. RAWLINGS, Architect, 3 Victoria Street, S.W. Quantities by Mr. Morris Evans, 7 John Street, Adelphi.  
Duplock . . . £29,550 0 0  
Whiteley . . . 27,140 0 0  
McGregor . . . 26,924 0 0  
Scrivenor & Co. . . . 26,787 0 0  
Green . . . 26,662 0 0  
Allen & Sons . . . 25,790 0 0  
Fish, Prestige & Co. . . . 25,740 0 0  
W. & H. Castle . . . 25,419 0 0  
Greenwood . . . 25,328 0 0  
Chapple . . . 25,236 0 0  
R. & E. Evans . . . 24,070 0 0  
Stephenson . . . 23,777 0 0  
Higgs . . . 23,350 0 0  
Webb & Rosser . . . 23,175 0 0  
H. & C. Lea . . . 23,100 0 0  
Dickenson . . . 22,777 0 0

For Heating New Business Premises, Clifford Street, York. J. L. BACON & Co., London (accepted).

For Heating St. Joseph's Convent, South Lambeth. J. L. BACON & Co., London (accepted).

## MIDDLESBROUGH.

For Construction of Main Sewer on Thornaby Green, near South Stockton-on-Tees, for the Middlesbrough Rural Sanitary Authority. Mr. J. HUNTER, Surveyor.  
Stainsby, Yarm . . . £300 0 0  
Atkinson, Stockton-on-Tees . . . 288 14 3  
Smith & Stockdale, Stockton-on-Tees . . . 273 0 0  
Tiernan, Normanby . . . 246 15 0  
Hunt, South Stockton . . . 230 14 0  
Robinson, Stockton-on-Tees . . . 228 0 9  
Spooner, Stockton-on-Tees . . . 224 17 6  
Earnshaw, Stockton-on-Tees . . . 205 0 0  
Agar, Saltburn-by-the-Sea . . . 204 15 0  
Swainston, Middlesbrough . . . 203 12 0  
Dowson, Guisborough . . . 195 8 3  
Skipper, South Bank . . . 188 9 0  
Tomkinson, South Stockton . . . 186 19 0  
Spence, Staindrop . . . 186 12 0  
Wilson, Middlesbrough . . . 184 17 6  
Hartley, Stockton-on-Tees . . . 180 12 11  
White & Son, Middlesbrough . . . 180 9 1  
Burrows, South Bank . . . 177 10 6  
Johnson & Son, Middlesbrough . . . 177 8 0  
Sharpe & Sons, Middlesbrough . . . 177 0 0  
Dixon, Preston-on-Tees . . . 175 0 0  
Waller & Dickenson, Saltburn-by-the-Sea . . . 170 0 0  
Wilson & Co., Middlesbrough . . . 169 4 7  
France, Middlesbrough . . . 165 15 0  
GOODHALL, Middlesbrough (accepted) . . . 158 2 11

## NEWMARKET.

For Alteration of Shop for Mr. Gilbert, Saddler, Newmarket. Mr. J. PLATMAN, Architect, Newmarket.  
Kerridge & Shaw, Cambridge . . . £599 0 0  
Simpson & Son, Newmarket . . . 545 0 0  
Saint & Son, St. Ives, Hunts . . . 530 0 0  
Denson, Mill Road, Cambridge . . . 450 0 0  
KENT & SAVAGE, Newmarket (accepted) . . . 356 0 0

## NEWPORT.

For Erection of Police Buildings, &c., Newport, Mon. Mr. WILLIAM TANNER, County Surveyor, Architect. Quantities by the Architect.  
King, Gloucester . . . £4,995 0 0  
Jones & Co., Gloucester . . . 4,570 0 0  
Hilton & Sons, Newport . . . 4,354 0 0  
Martin, Newport . . . 4,260 0 0  
Williams, Newport . . . 4,250 0 0  
Brind, Newport . . . 4,232 0 0  
Burgoyne, Blaenavon . . . 4,200 0 0  
Forse, Bristol . . . 4,200 0 0  
Church, Bristol . . . 4,179 0 0  
Wilkins, Newport . . . 4,140 0 0  
Blackburn, Newport . . . 4,139 0 0  
Davies, Cardiff . . . 4,109 0 0  
Prosser, Newport . . . 4,070 0 0  
Miles, Newport . . . 3,993 0 0  
LINTON, Newport (accepted) . . . 3,990 0 0  
Architect's estimate . . . 4,200 0 0

## NEWTON.

For Laying Pipe Sewers, &c., (1,400 yards), Newton. Mr. R. BRIERLEY, Engineer.  
White, Liverpool . . . £1,925 0 0  
Dale, Northwich . . . 1,634 14 0  
Rayner, Bootle . . . 1,600 0 0  
Fawkes Bros., Southport . . . 1,506 14 11  
Heyes, Bolton . . . 1,453 1 7  
Cunliffe, Leigh . . . 1,387 10 3  
Lomas, Eccles . . . 1,280 1 7  
Wood, Tyldesley . . . 1,200 0 0  
Cowburn & Son, Hindley . . . 1,186 0 0  
Heaton, Warrington . . . 1,130 0 0  
Widdow, Elton . . . 1,090 0 0  
Winnard, Wigan . . . 1,090 0 0  
PENNINGTON, Earlstown (accepted) . . . 989 0 0

## NORMANTON.

For Alterations and Additions to Ten Inns at Normanton, for the Tadcaster Tower Brewery Company, of York. Messrs. WILLIAM LEWIS & SON, Architects and Surveyors, 46½ Stonegate, York.  
Walker Bros., Castleford.  
Butler, Pontefract.



PLYMOUTH.

For Works of Alteration and Addition at the Workhouse, Plymouth.

Read, Plymouth	£299 0 0
Gill, Devonport	275 0 0
Everett & Launder, Plymouth	266 0 0
Palk & Partridge, Plymouth	233 0 0
SHELLABEE, Mutley (accepted)	198 0 0

STALYBRIDGE.

For Completing Drill Hall, Armoury, and Offices, Painting, &c., present Structure, for the 4th C. R. Volunteers. Messrs. GREGORY GILL & SON, Architects, Stalybridge. Quantities by the Architects.

Shaw, Cuzner & Co., Stalybridge	£1,040 0 0
Grayson, Stalybridge	972 0 0
Ives, Stalybridge	966 15 0
GARSDIE, BARNES & Co. (accepted)	960 0 0
France	957 17 1
Castle Hall Sawmills Co.	955 0 0

Heating Apparatus (Low-pressure).

Swain, Hyde	75 0 0
WAGSTAFF, Dukinfield (accepted)	70 0 0
Dawson & Co., Stalybridge	68 10 0

THIRSK.

For Additions and Alterations to All Saints' Catholic Church, Thirsk. Messrs. WILLIAM LEWIS & SON, Architects, 46½ Stonegate, York. Hughes, York.

TONBRIDGE.

For the Erection of a Villa Residence, Tonbridge. Mr. S. W. HAUGHTON, Architect, East Grinstead. PUNNETT & SONS (accepted) £730 0 0

YARMOUTH.

For Building two Cottages, Great Yarmouth. Mr. WM. B. COCKRILL, Architect, Gorleston, Great Yarmouth.

Want	£264 0 0
Cork & Beach	255 0 0
Bray	248 0 0
Fox	229 0 0
Whall	214 0 0
Grimble & Watts	202 0 0
Bristow	193 0 0
Wright	191 0 0
LAMB (accepted)	170 10 0
Barnard	168 0 0

WORTHING.

For Cast Ventilating Pipes and Bends, Worthing. Mr. WALTER HORNE, Engineer.

Macfarlane & Co., Glasgow	£20 10 0
Rownsdon & Drew, London	16 10 0
Moser & Sons, London	15 15 0
Smith & Co., Glasgow	14 11 9
WATSON, GOW & Co., Glasgow (accepted)	13 18 6

YORK.

For New Front and Additions to the Yorkshire Gazette Office, High Ousegate, York, for the North-East Yorkshire Conservative Newspaper and Printing Company, Limited. Messrs. WILLIAM LEWIS & SON, Architects and Surveyors, 46½ Stonegate, York. Simpson & Son, Heworth (Measure and Value).

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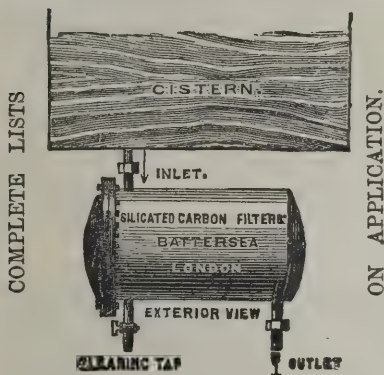
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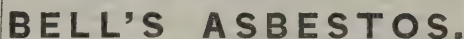
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# The Architect.

## THE DECORATION OF THE DOME OF ST. PAUL'S.



HE adjourned discussion which is appointed for Monday evening next at the Institute of Architects may possibly—in spite of something like a rule to the contrary which unfortunately seems to operate in such cases—bring out some new views of criticism; and, in connection with a subject of such unusual interest, we hope it may; but we need not defer offering a few remarks upon the treatment of the question at the last meeting, even if we have to refer to the matter again. For, in fact, the general drift

of thought upon an exceedingly delicate artistic problem has already been sufficiently developed to enable even those who are comparatively uninitiated, not merely to understand the scope of the proposals, but to follow the consideration of their principles.

Six rival ideas have been brought forward up to the present time, which may be designated as follows:—(1) Ribbed work; (2) coffered work; (3) columnar-work; (4) arched work; (5) panel work; and (6) vault work.

It must be clearly borne in mind uninterruptedly in this discussion, that the problem is how to decorate, by painting, the smooth surface of a hemispherical interior cupola about 100 feet in diameter, and 220 feet high from the floor to the crown; that there is at the crown a small open eye; and that the whole concave is lighted very dimly from below. It has also to be observed that the "subjacent architecture" is a peristyle of thirty-two columns, with a plain unbroken entablature. One other circumstance that may in some degree affect the question is this: the crux below being octagonal in disposition, the peristyle above is likewise *octagonalised* by filling in with close panels the eight intercolumnar spaces which stand at equal intervals over the eight supporting piers; the interspaces otherwise, twenty-four in number, being occupied by open windows.

As regards the effect of the lighting upon any work of decoration in the concave dome, we must further note that the windows of the peristyle, immediately underneath, constitute eight triplets or groups of three, left as yet in the glaring white glass of Philistinism, whereby they "try the eyes" very much; while the opening at the apex is practically worse than useless, being bright enough, not to illuminate the vault, but only to render it difficult to see what may be painted, even in gold. Lastly, the hazy atmosphere of the City of London may be taken into account.

It is manifestly a fundamental question whether the decoration of such a cupola is or is not to proceed upon architectural principles. If it is to do so, then perhaps the best of all courses to pursue is to place in considerable relief upon the surface of the hemisphere the requisite rib-decoration or tracery, and then to finish with painted work upon this basis. But no one proposes to do this. Whatever is proposed to be done is to be done in painting alone.

There are, as the next step, more ways than one of using painting. One way is to paint some sort of express imitation of architecture; and it is probably right to say at once that this, although there are many precedents for it, including the original and extant decoration, is essentially a barbarous way. Painted architecture has never been satisfactory, and never can be. But at the same time it is quite possible to adopt something of the character of an architectesque arrangement for the leading features of the decorative composition; and, provided this were carried out strictly in the flat—without either "modelling" or shadowing—it might be satisfactory enough.

The first of the six rival principles above mentioned, that of simple ribbed work, is splendidly exemplified in the case of St. Peter's at Rome. We see it on the outside of the dome of St. Paul's, and indeed of most other domes. The circumference is divided into regular intervals, and converging ribs ascend directly from the base to the summit, leaving long narrow triangles of flat surface between them, which in an in-

terior dome are left for panelling or painting. This mode of treatment, however, ought properly to be always carried out in relief; and it ought still more properly to constitute, as in Gothic vaulting, the actual construction of the vault, being scientifically one of the two elementary ways in which a dome may be built. In St. Peter's there are sixteen of such ribs, corresponding with sixteen couples of columns in the peristyle below; in St. Paul's there would probably have to be thirty-two, because the columns are not coupled. If planted on the surface in relief, these ribs might at the worst represent a magnificent cage-roof beyond which the vault of heaven might be filled with ethereal figures; but if to be painted on the flat, as a framework for figures which would probably stand between them one over another in a too solid representation of flesh and drapery, the idea would probably be discarded by most of us without further debate.

Secondly, coffered work may be described as reticulated panelling covering the whole surface in any one of various recognised patterns. The noblest example of this is in the Pantheon at Rome, the ancient hall of the Baths of Agrippa. Here thirty-two vertical ribs rise from around the base and converge upon the eye at the crown, while horizontal ribs cross them at such intervals as to form square panels; the relief is very massive and the effect simple and grand. The Pantheon at Paris, or church of Ste.-Geneviève, has its dome coffered in a similar way, only that the square panels are slightly octagonalised; but here the "eye" of the dome is large, and exposes an outer or super-cupola beyond, which is painted in figure-groups and sufficiently well lighted. In St. Paul's the adoption of coffered work, if painted on the flat, would be after the manner of inlay, and in bright mosaic, chiefly gold, would no doubt have a grand effect of a purely architectesque character. But something more striking than this is evidently desired.

The term columnar-work we are applying to all ideas of decorative painting which involve the representation of colonnades, arcades, and other such architectural compositions. Of this order the existing painting in St. Paul's dome by THORNHILL is a conspicuous illustration. Taking for his points of departure the eight closed interspaces in the colonnade below, he has carried up from each of these a couple of tall columns with a piece of entablature over them, and eight arches span over the narrow intervals thus left at the summit. The work of painting then takes the form of a continuous figure picture receding behind the colonnade, or eight panel pictures framed by the colonnade. The objection to this mode of treatment is plain: a continuous story-picture is out of place, and indeed out of sight, in such a situation; eight panel pictures are quite as much so; and the painted architecture is in principle entirely absurd, even if its difficulties of perspective were not almost ludicrous. In the design which the late Mr. BURGESS prepared, the architectural mode of treatment was still accepted, which may surprise many of the admirers of that very accomplished artist; but it has only to be remembered how completely Mr. BURGESS was wrapped up in academical precedent, and the reason becomes plain. His principle, however, was that of the Byzantine arcade, not of the Renaissance colonnade; and the effect was that of work in concentric circles, or in successive storeys—suggestive, by-the-by, of another plan for dome construction, namely, the ring-system, which indeed is better than the rib-system.

The fourth mode of the six above named, or that of arched work, has been quite recently proposed to be applied to the St. Paul's problem in a grand way by Mr. WYLD. It is that which is called by Mr. STANNUS the "abscissate principle," and in actual dome-building it belongs chiefly to the East. A hemispherical dome is intersected by two barrel vaults standing at right angles with each other, both of less diameter than the dome necessarily, but springing from the same level. The result is that the upper portion of the dome seems to be a segmental vault carried upon the crowns of four semicircular arches, which is then continued downwards on the same curve in the four triangular spandrels or pendentives between the arches. Mr. WYLD proposes to paint upon the St. Paul's dome four great semicircular arches of this sort, to put into each semicircle a grandiose figure group, and to finish with a ring of figures above. The most striking objection to this plan is that the *four* abutments of these great arches and the *eight* close spaces of the peristyle cannot be brought into accord except by placing each of the four abutments over the centre window of one of the eight triplets; which is weak in



effect. Moreover, there must be some difficulty in accounting for the four great arches themselves if the question be put—What could they represent in the way of structure?

Here we may refer to the circumstance that the great architect of St. Paul's certainly seems to have had in his mind in designing the dome the angular element as distinguished from the circular. The lantern which crowns it externally is not round but square on plan. The piers of the crux are disposed on an octagon. The peristyle under the concave vault is broken up to correspond with this octagon. THORNHILL'S painted architectural framework again corresponds, being itself a make-believe octagon in perfect form. What may have been the personal intentions of Sir CHRISTOPHER WREN with reference to the decoration of the dome many of us seem to be unable to guess. It is scarcely possible that so graceful an intelligence as his undoubtedly was could have failed to take the subject into consideration; and it is not to be supposed that his plain vaulted surface was meant for anything else but painting; the chances are, therefore, that he contemplated exactly what was done, namely, that a painter should design the work in his own way, which would of course at that time be upon some academical Renaissance model. That WREN'S intentions ought to govern the artists of our own day, however, is not at all a matter of course, and it is somewhat surprising that so much should be said about them by critics who ought at least to feel that the whole system of his time in such decoration was a thing that is not worth following now. All that need be seriously said with regard to WREN'S decorative intentions seems to be this—that the artist who was capable of objecting so emphatically to the obscuration of his chancel by "a d—d box of whistles" was not at all likely to be an advocate of the ultra-evangelical bareness of absolutely plain stonework for the ceilings of so grand a temple of Christian worship. How far he would himself have gone in the direction of picture-paintings we need not inquire; but he most assuredly could not have wished posterity to neglect the opportunity, when it should arise, of making the edifice, within rational limits, "all glorious within."

### THE PERMANENT AND THE TRANSIENT IN ART.

IT must have been often remarked that pictures which represent incidents of modern life assume a sort of antique character in the course of a short time. This is no less true of drawings and engravings of similar subjects. The *Ramsgate Sands* and *Railway Station* of Mr. FRITH may be taken as examples. They are supposed to have been faithful records of contemporary life; but hardly a generation has elapsed and the world finds that it has little relation with them. Whether this transformation arises from the accuracy with which fashions of dress have been depicted, or from something peculiar in the subjects themselves, may give rise to discussion; but about the estrangement between the spectators and the pictures there can be no doubt. It may be asked why pictures by WILKIE and MULREADY are taken from modern life, and yet retain their hold on the public? But neither artist cared to exhibit the fidelity of Mr. FRITH; and the costumes, surroundings, and details will not bear the tests that can be applied to his works. A more remarkable instance will be found in the sketches by JOHN LEECH, which may be said to reflect the English people of his time. Their value as historical evidence of manners and costume will increase; but what is thought of them by the young ladies of the present, who are so charmingly drawn by Mr. DU MAURIER? Are not the cheerful, comely, crinolined figures declared to be "frights"? If Mr. TENNIEL'S fame depended on his illustrations to stories which were written in days when men wore "peg-tops," his surprising power of representation would avail but little.

In sculpture there is a similar phenomenon whenever the subjects are supposed to have been connected with the time when the works were produced. Portrait statues and busts which perpetuate temporary modes among hairdressers and tailors, do not seem to bear letters of recommendation to posterity. Paradoxical as it may appear, it would not be far wrong to say that such works as the Elgin Marbles have a more modern air, or, in other words, are less separated from the present time, than many of the pictures and statues which

have been seen in Burlington House. An equestrian from Rotten Row would be more likely to recognise kinship in the cavaliers of the Panathenaic Procession than in the figure of the horseman which stands in Holborn Circus, although the latter is as true in its way as any dummy bearing a field-marshal's uniform in an army tailor's shop. To a student of the history of costume the figure of the PRINCE CONSORT will hereafter have its value, for the sculptor seems to have been inspired by the soul of a foreman cutter. Happily for art, students of that class are at all times likely to be in a minority. It is sure to share the fate of the statue of GEORGE III. in Cockspur Street, which is also a conscientious and estimable piece of work according to tailors and perruquiers' notions, yet might be removed to-morrow without exciting the regret of the crossing-sweeper. What could be more correct as a reproduction of the British cocked hat, frock coat, saddle, and field glass than the amazing figure which was lately removed to Aldershot? But, however excellent "the truth, the whole truth, and nothing but the truth" may be as a formula, it could not preserve even a part of the group for London. Probably few people would regret if the remaining statues of the Duke throughout England were sent to Hampshire to form a circle around it.

Do we not find a nearly similar state of things in literature? The books which reflect the life of an age become almost as quickly superseded as the corresponding pictures. The descriptions of London which DICKENS wrote in his first books have in less than half a century lost much of their effect. It has become almost a task to read those parts of the *Waverley Novels* in which SCOTT was truest to his own time. With all one's reverence for the Wizard of the North the law of skip has to be applied to him, and shrewd publishers recognising the inevitable give editions of his tales in which whole chapters are omitted. Who now reads the novels by GALT and others, which are said to be no less characteristic of Scottish life? A like fate has befallen literature of an earlier age. The plays which held the mirror up to nature in ELIZABETH'S days are known only to specialists. If SHAKESPEARE has met with a better fortune it is due not entirely to his surpassing genius, but to his generic descriptions. He is more than an Elizabethan subject. His scenes lie in "the brightest heaven of invention" rather than in Southwark or Stratford or the Queen's Court. Yet with all our reverence for the greatest name in literature, SHAKESPEARE is less influential than HOMER or VIRGIL as a factor in English education. A sort of protective system has to be instituted in order to gain a footing for a few of the plays in colleges and schools, and it is almost under compulsion that young people are made to study SHAKESPEARE as a classic.

We have left the consideration of architecture for the last place. If, however, we have referred to painting, sculpture, and literature, it is for the purpose of suggesting that they also come under an influence which, in a mysterious way, makes one form of a thing have a permanent interest, while other forms are only transient. Why, for example, should a copy in bronze of GEORGE III.'s pigtail become ridiculous in a few years, while the tangled locks of a Greek satyr in a relief that may have been carved three thousand years ago are not so? Why is the tuft of hair on RAUCH'S fine statue of the *Seated Victory* considered to be an excrescence which might be removed with advantage? The answer may be given in a few words. The modern sculptors copied arrangements of hair that happened to be in vogue at the time, while the patterns which were set up by the Greeks were probably independent of what was adopted. In costume it is the same. At the time when PHEIDIAS was superintending the works, the Athenian ladies may not have enveloped themselves in the voluminous drapery that is seen on the statues of the Fates from the Parthenon. The sculptor's office, as he recognised it, was not to produce a record of fashion in stone, and conclusions respecting costume should be drawn with more or less reserve from the figures. PHEIDIAS, we may be certain, gave more thought to the folds of the drapery than to the objections of the Athenian modistes.

Looking at the history of sculpture and literature it would appear that, in spite of all the efforts which were made for many hundreds of years, the works produced by the Greeks still continue in their supremacy. What is more important is that the statues which follow a Greek model have a better chance of overcoming the vicissitudes of time than those which have a more modern character. Almost analogous conclusions



could be drawn in respect of books, and with even less hesitation in respect of architecture.

What must strike the most superficial student of architectural history is that the influence of Greek examples has been exercised over a larger area of the civilised world and for a longer time than that of any others. There is no denying the majesty of Egyptian temples, but is there a chance of building half a dozen copies in the course of a century in any part of the world? The stuffs, metal-work, and carving of India are being more esteemed in Europe, still no one thinks of going into raptures over the buildings or of importing a gang of masons to erect a copy of an Indian house in the suburbs of London. Moorish work is very beautiful, but it is as much outside this world of ours as if it were Mexican or Chinese. What we see to-day has been long seen. All styles, with the exception of the Greek and its derivatives, have been local in application, found in districts that are outlying, far apart, and therefore isolated from that region wherein a progressive civilisation is the most marked characteristic.

Greek architecture has, when compared with other varieties, a claim to be considered as imperial, not only on account of the extent of the earth-surface in which some variety of it is seen, but also on account of its qualities. A Greek temple is supposed to correspond with the Greek character, and therefore may appear to be as local in its way as an Egyptian or other work. But the efforts which were made by the Greeks to improve the details of their architecture, what were they but attempts to remove everything which could be considered merely local or insular? A temple such as the Parthenon hardly looks like the work of an individual designer. There is nothing to denote any one man's peculiarities. In its way it is as purely intellectual as a book on geometry, and as much aloof from provincialism. Greek inventiveness must have been sorely tried by the restrictions which were put on novelties, and the little scope that was given to the imagination of the artists. Think of the labour that was necessary in setting out the subtle curves which are found in horizontal as well as vertical parts, and how the men must have felt that their refinements would be not appreciated by all eyes. The sculpture of the pediments, frieze, and metopes represented local traditions, and was a glorification of Athens, but the architecture belonged to the human race, and exemplified the reasoning no less than the æsthetic faculties of man. It was a search after perfection, and was one of the very few which obtained success.

The Parthenon being one of the products of that "dry-light" of the intellect which BACON desired, there is no reason why it should not be as universally adopted as the geometry of EUCLID. It can never become obsolete or old-fashioned, for the qualities which bring decay to a work have been eliminated from it. But from its perfection as a temple destined for a peculiar site it is limited in its application. A logical development of the Parthenon by Greek hands for secular purposes would have been a treasure. Among the Roman works which have been destroyed without any record of them surviving there may have been an attempt of the kind. We must, however, take Roman architecture as we find it, and recognise it as the successor of Greek work. Then after the lapse of centuries we find a resurrectionised Greek in ANDREA PALLADIO.

Italian architecture, of which he is the leading spirit, has inherited the position, if not the power, of the architecture of Greece. It is the style which in the nineteenth century has most claim to be regarded as universal. It is applied in all parts of the civilised world, and, somehow, never seems out of place. An English church, a colonial Parliament-house, a bank in a Chinese port, an American millionaire's palace, a railway-station, a public office, a theatre, can be equally well carried out in the style. So much cannot be said of any other style. Gothic, which for a long time has been its rival, has had to succumb to it.

The objection that can be raised against Italian as well as Greek architecture is that both are cold and inexpressive, and therefore ill-adapted to modern use. But are these qualities defects? A building is not always made to serve the use of one generation, and care should therefore be taken that expressive power does not in a little time become a bore. The symbolism that thirty years ago was supposed to be exhibited by a Gothic church, is it not occasionally a little wearisome? A dozen years hence will occupiers of houses dedicated to Queen ANNE be sincere worshippers of the lilies and sun-

flowers which may be included among the fixtures? If the present age has anything to express, it has no need of opportunities without turning architecture into an organ. A man can do as he likes with his own, and, if he despises a frozen architecture, such as Greek or Italian, it is easy to give him means to display his craving for notoriety. But there is an iron law which shows scant mercy to all freaks of fashion or of vanity. In literature, painting, and sculpture, nearly everything relating to them is only of transient interest, and apparently the same result is more constant in architecture.

## THE ARCHITECTURAL ASSOCIATION.

THE third ordinary meeting of the Association was held on Friday evening, the 21st inst., Mr. Cole A. Adams, president, in the chair.

### Amphitheatre at Senlis.

The PRESIDENT called attention to a letter received from the Secretary of the Restoration Committee of the Senlis Amphitheatre, stating that a lottery had been started for funds, and further adverting to the visit of the Association there in 1874, and the pleasure they had had in receiving the Association and showing them the amphitheatre. The President said that members who had joined in that excursion would no doubt, in view of the courtesy which had been extended to them in a foreign country, wish in the same spirit of courtesy and reciprocity of feeling to contribute something to the work. Any contributions sent to the hon. secretaries of the Association would be forwarded by them to Senlis, in the name of those who had taken part in the excursion.

Mr. G. AITCHISON, A.R.A., read a paper as follows:—

### On the Prospects of Architecture.

It is a pleasure to address you, for many reasons, and for these two in particular—because you are the natural heirs of the men of my era, and because nothing that is worth hearing will escape you.

You are in the enjoyment of youth and enthusiasm; some anxious to learn what can be taught, and to assimilate what should be assimilated; others burning to enrich London, their native town, their country, or even the world, with their works, which they hope will surpass the former achievements of man:—

If Nature put not forth her power  
About the opening of the flower,  
Who is it that could live an hour?

While we of more mature years, who have suffered the rubs of fortune, and most of whose illusions have passed away, are more anxious to give caution and encouragement to those who are to carry forward our torch in the race than for our own success.

It might, perhaps, be more agreeable to my hearers and myself were I to speak of colour—easier for me, and affording you the chance of feasting your eyes on fine old things when you are tired of listening. Yet it seems to me more important to point out to you the position of the art, the necessity of improving our practice of it, and, if possible, of showing the way. No improvement that I could suggest would compare in usefulness to the rousing your enthusiasm to that white heat in which the whole man is changed to that glorified state from which heroes and martyrs have been formed; for surely if our art is within measurable time to take the sublime forms that it assumed in ancient Greece, the new and mystic forms it took in Mediæval Europe, or the graceful and fantastic forms of the budding Renaissance, it can only be through the exultation of a few, whose fiery enthusiasm and abnegation of self will kindle the sacred fire in hearts now devoted to self-interest, self-advancement, self-glorification, and the meagre joys of five per cent.

You will have to turn your backs on the City of Destruction, to pass through the Slough of Despond, before you can enter in at the Straight Gate. And, unfortunately, there is no Evangelist to comfort you when you faint, nor to strengthen your resolves when you waver.

As I understand, there are certain conditions without which architecture, as an art, is impossible; there must be the laid-up wealth, much building on a large scale, and a taste—nay, a passion—for beauty, for sublimity, and magnificence, amongst the public; and there must be those conditions of law and custom that will not thwart the desires of the owner of the building. There must be the architects, honest, skilful, and inventive. I think we cannot doubt that the laid-up wealth exists, nor the need of buildings, some, at least, of large size, nor a sort of sluggish taste for work good of its kind; but I think we may safely say there is no overmastering passion in the public for architectural beauty or magnificence. There is, of course, discernment enough to know a good building from a bad one, but the inclination is rather to pick holes in the best building than to thank God that anything so beautiful could be made by man.

There are, however, laws and customs that, perhaps, do more than general apathy itself to check the development of the rising



taste for beauty; for instance, "leasehold tenure." Who will build magnificently for some one else? Is it credible that anyone will secure superb workmanship, the most enduring materials, and all the art that the best architect, sculptor, and painter can supply, if the building is to pass to a stranger at the end of sixty, eighty, or ninety-nine years? Besides, the freeholder will look to see that what his tenant wants to make his house perfectly fitted for himself is also fitted for after-tenants, even when he does not force upon his tenant some of his own views of propriety and beauty.

There is a fashion now for buying pictures, and an excellent fashion, too, so far as it goes, but I fear it is not altogether separable from the idea, that if the pictures are skilfully chosen they are better investments than any known on the Stock Exchange: else why are there so few friezes, wall pictures, and mosaics in buildings that are not leasehold? I merely mention this because it might otherwise seem that architecture had been outstripped in the race by the sister art. I am by no means sure that this is not the case; and if it be so, let us again draw up to the painters, and pass them if we can; no one objects to generous rivalry.

I ask, if painting be truly and honestly admired for its own sake, how it comes about that none of the pæans sung in its praise are sung in praise of our art? And why the architects who build more excellently than their fellows are not run after like the celebrated painters? On the whole we may say that the first half of the last one hundred years was a very artless one. We escaped from perhaps a worse fate than once threatened Greece, but no temples rose, and few monuments recorded our thankfulness and our victory. When we had modestly housed the Duke, put up a bronze Achilles to his glory, named Waterloo Place, Waterloo Bridge, Waterloo Road, and Waterloo Blue, our thankfulness and our enthusiasm expired.

If we compare the spirit of the Florentines in the thirteenth century, only just emerging from barbarism, and owning but one tiny city, determining that their new cathedral, St. Mary of the Blossoms, should exceed in magnificence any building that Greeks, Romans, or the proudest people of the earth had built, what a contrast they make with us, possessing an empire on which the sun never sets, but doubting whether we have enough courage, energy, and industry to keep what our fathers won for us, and when the supreme aim of the Government is to see if it cannot save three-halfpence off the architect's commission. So much for the public; now for ourselves. It would be as insulting as untrue to doubt the honesty of the generality of architects. I do not doubt that amongst the whole body of them there is much more skill than could have been found for a century or more, and it would be invidious to compare the individual excellence of living architects with the great who have passed away. We have reburnished the rusty armour and weapons of antiquity and the Middle Ages, are fairly skilful at the old fence; but I fear we lack the heart and the inventiveness of the old Paladins. No *coup de Jarnac* seems to be invented now. We bear too much resemblance to the men in armour at the Lord Mayor's show; the armour and weapons may be as good and as bright as armour or weapons ever were, the men may be bigger and their thews as strong; but their hearts have not the ancient courage, nor their souls the same devotion; and, even if the men were our modern Paladins, they would not fight in that armour nor with those weapons. Do not fancy that I suppose that any man can evolve a style; there must be something to start from, and a multitude striving in the same direction, every one of that multitude anxious to solve the pressing problems of the day, and several generations to bring the new thoughts to anything like completeness: but what we all feel is the absence of the first step. You know Viollet-le-Duc's comparison of the architects to an opera chorus singing "Let us go," though they all stand still.

It may be that the grand gift of architectural invention is only to be found in what we call new races; barbarous races that have suddenly emerged from their homes, who find themselves conquerors, and face to face with a higher civilisation, and in the possession of unheard-of wealth—such races as the Arabs and the Normans.

Amongst civilised nations, the Roman was the only one I know that slowly evolved a style. Unless one were a prophet, a necromancer, or whatever he be called, who can depict the probable development of past possibilities, it is impossible to say whether the Romans would have created a style of their own, could they have increased in wealth and civilisation without the subjugation of the known world. All we know is, they did not; they were born constructors, and had cultivated this native gift to great perfection even before they conquered Greece. The artistic excellence of Greek architecture dazzled their eyes and enslaved their minds. Like ourselves, they wanted excellence ready-made, and would not wait for its growth; but they were too practical a people to give up their advanced system of construction for the primitive one of Greece. They were not artistic enough to apply at once Greek principles of beauty to their own new forms of construction—the arch, the vault, and the dome. So apparently the art architect was created. He stuck vulgarised imitations of Greek work on to Roman construction, and it was not till five or

six centuries had elapsed that the Romans possessed a real style, one that ornamented their own native construction with appropriate forms. This style we now call the Byzantine.

The Greeks carried the old style of construction—the post and lintel—to the highest artistic perfection, and in a style differing from the Egyptian, Assyrian, or Indian; so a new system of construction is not necessary for a new style. The Romans having new constructive elements, gradually learned how to clothe them in forms of beauty that neither hid nor belied constructive truth.

The Arabs—for we call the conquered people by the name of their conquerors—somewhat improved on Roman construction, and certainly clothed their construction with forms that were wholly new and original. One of the most striking features of Arab architecture is the stalactite or honeycomb work, and, if Owen Jones's assertion is to be believed, this was gradually evolved from the attempt at copying series of superposed eggs and tongues that took their fancy. Here, to say the least, is the one step forward from which came such wonderful results. Before we have analysed the elements of it, an Arab honeycombed dome does not seem to be the work of man's hand, but to be the work of some superior being. Though I hope I may be wrong, I do not see this tendency towards development in modern architecture.

The Normans, with examples of Roman and Byzantine work at home, and with reminiscences of Syriac and Arab work abroad, gradually evolved a wholly new style. They, or some of the people they conquered and animated with their restless energy, developed the arch and vault to their uttermost perfection, and I think we may say they evolved and developed tracery.

If you think of the continuous invention implied in passing from columned and arched windows to the fantastic tracery of the Flamboyant, at first sight it seems that there was more invention then than now, perhaps because we can now see the transitions at a glance, though it really took four or five centuries to complete the development. Phases of plant growth, before overlooked or disregarded, took their fancy, and they piled the pyramid on the tower, and so gave what we suppose to be a novel aspect to buildings. At any rate, we know that the Christian cathedral is very different from the Pagan temple. Whether in the Babel of architecture that now exists we are slowly evolving a new style, no one who lives in it can say. We must not forget the almost frenzied energy with which the English architects of fifty years ago threw themselves into Gothic, how perfectly they mastered its apparent intricacy, till a Mediæval, revisiting the earth, might believe he had come back to his own time again. This training, with the Roman Classic forms ingrained in the people and re-revived, points to a new style partaking of both elements.

All I can do is to point out to you what little observations I have made. You have often heard me say that I believe that what taste there is, that is not antiquarian, lies in the direction of simplicity, and as I am sometimes charged with paradox—that is, saying that which though true is strange—I will now explain my reasons. The old sailing ship of my youth was of the uttermost complexity, with masts, yards, booms, and bowsprits, with shrouds, ropes, and dead-eyes, sails and pennons, a sculptured figure-head, and carved stern, while that modern monster of the deep—the ironclad—is as simple and black as a dolphin, with nothing but a funnel for its back fin. The old dinner-knife, curved like a scimitar, with its blobbed end to prevent stabbing and to eat peas with, its conical handle coloured green, and bossed with silver, has made way for the rectangular blade, in its oblong haft. The many-runged chair, ornamentally turned and fancifully carved, has been supplanted by one of four plain legs, with two rounded uprights, and a slightly curved top. I am not now speaking of art furniture. Every wheeled carriage that is turned out aims day by day at being more perfectly simple, and harness becomes less and less without a stitch or a rivet that is not for pure use. So much so that the old waggons we sometimes see, all chamfered curiously, the horses' harness covered with jingling brass plates, pierced and engraved, and with ornamental stitching, remind one of Mediæval days. And what can be of sterner simplicity than the new carriage of our time—the bicycle—which, when bestridden, presents us with the centaur of the nineteenth century? Take these observations for what they are worth: to me they point to simplicity of taste. We have two absolutely new materials, iron and cement concrete, and both these materials almost force us back to the pure post-and-lintel construction of the early days of our race. The use of iron should, at least, be marked in some way; but hitherto we have adopted the Roman plan. The girders with their vaults are covered up with a false ceiling in imitation of wood framework; and we cannot as yet be said to have turned ironwork to much æsthetic use. Of ornament we have no lack: does it point to anything in the heavens above, the earth beneath, or the waters under the earth, that the cultivated man of the nineteenth century cares for? We have our sacred animals, those devoted to sport—the fox, the roebuck, the red-deer, the pheasant, the partridge, the grouse, the woodcock, the trout, and the salmon. Do we ever see one of these put on a house because the owner is a hunter, a sportsman, or a fly-fisher? Do we see domestic pets—a cat, a dog, a canary, or a squirrel—carved on a house? Though there was one squirrel immortalised by figuring in the centre of each drawing-room frieze of a speculative builder's row of houses, this



squirrel would "have cracked his nuts in liberty" had not both been of plaster. Lions' heads we see by scores because the Egyptians, Greeks, and Romans liked them; nay, I have seen bullocks' heads on a bank, but I took that for the architect's monogram.

There are two emblems that the modern architect has taken under his especial protection, the stone cannon-ball and the flower-pot, and these are now receiving their apotheosis. The flower-pot I think I understand, but why the cannon-ball? Figure sculpture of this century we cannot have; our dress is too ignoble to be represented in any lasting material of one colour, and this is a terrible misfortune, for the bulk of mankind care for nothing but the present. The architect, like the poet, is born, and not made; though when either is born he takes a good deal of making; but in one respect the architect is more like the soldier than the poet, for after he has endured his training, and learned his drill, it is from the teaching of the actual strife that great generals and great architects are formed. Since the incubation of the Renaissance it is curious to note how few great architects there have been who have not measured some of the celebrated ruins of antiquity, at least of those who have succeeded in making fine monumental buildings.

The close communion with antique greatness seems in some measure to impart that greatness to those fitted to receive it. So, few great modern poets have not been Classical scholars; those grand exceptions—Shakespeare and Burns—were not unconscious of this misfortune, and repaired it by studying the antique masterpieces at second-hand.

Drawing is doubtless a great art. Not only does it enable us to show completely and brilliantly what we mean to do, but the training to eye and hand is invaluable, and we can mostly distinguish between the works of the architects who can draw and those who cannot; and if we cannot, the architect who is a brilliant draughtsman can, for he sees the improvised turns that the mere art of drawing suggests. Still this brilliant achievement is being carried in the present day beyond its legitimate end, or rather, I should say, it is made too much of, to the exclusion of more important things; though it helps us by forcing us to observe, and reveals to us some of the causes of excellence in buildings, though it enables us to have a useful gallery at hand for our study, commands immediate recognition, some flattery, and frequent success. It is scarcely studying architecture, and is too apt to draw us away from more tedious studies, such as measuring fine examples and calculating their proportions, studies more necessary for our education, and which are apt to call down on us the contempt of our friends and the gibes of painters, though the end of these studies is to increase our knowledge and to enable us to acquire that skill which is the peculiarity of the architect as distinct from the builder, the engineer, the draughtsman, or the designer. Paradox as it may seem, architectural invention is not the one distinguishing characteristic of the architect. His distinguishing characteristic is the knowing how buildings and their details will look at the height and distance at which they are to be seen; and this can only be learned by actual practice, if it be not learned by the measurement of existing buildings. Pheidias was a monumental sculptor, and in the competition for the pediment of the Parthenon his work was judged to be the worst; but he insisted that, as the sculpture was to be on a pediment, not on the ground, it must be seen at the proper height, and when this was done his was seen to be the best.

Mr. Ruskin, after one of his brilliant descriptions of an atmospheric effect on a distant hill, argues *à priori* on the probabilities of what the substance was which produced that effect, whether it was marble, ice, snow, or gold. He then walked up the hill, and found it to be caused by a wood of pine trees, and expatiates on the strangeness of the material chosen by Nature to produce such an effect. This is just our case. We have sketched something in a building which we consider successful, and are surprised when we try to produce a similar effect that our work is a failure. It is so because we have used the ice or gold instead of the pine wood. When you learn to draw freehand learn figure drawing, for not only does the padding out of the ghastly bones with the necessary flesh give lessons of how the purely necessary can be clothed with beauty, but the figure gives the best lessons in form, and the exquisite refinements that Nature resorts to, and it also teaches us the comparatively small difference between the curves that make beauty and those which make ugliness.

One form of wisdom, however, consists in proportioning our efforts to the task we have to do and the time and strength at our disposal, and it is not wise to make our plan so vast that we shall have neither time nor materials to rear the building.

The three great divisions of architecture are arrangement, construction, and beauty; each division is transcendental, and no man that ever lived could say he had perfectly mastered one of these subjects. Construction alone has of late years been raised into a profession, and no engineer could say that he had mastered it, and yet we have in that profession men of special and extraordinary ability, who have devoted their whole time to its study, who have won by it fame, titles, and fortune. And though M. C. Garnier's joke is not quite true that they are only architects who have not finished their education, yet to gain the name of archi-

tect we must combine in some degree all three. That this combination, with extraordinary excellence in each branch, has not been beyond the powers of some giants, who have added to it sculpture, painting, and poetry, is a reason why giants should not despair. All I say is, let us be sure we are good architects before we become painters, sculptors, and poets, and let us not lose the substance for the shadow. To aim at everything and to do nothing well is not, in my opinion, to win self-respect, not even fame.

Some of you may recollect Martial's epigram on Attalus, who did everything prettily:—

He that doth nothing well, all prettily,  
A very idle-busy-man must be.

No country, however, wants the aid of the real architectural sculptor so much as England. And if your taste leads you to abandon architecture, and become an accomplished architectural sculptor, every wise architect will hail you with delight. I may also mention incidentally that France has almost the monopoly of architectural illustration; the whole world is supplied by her, at least when the books are illustrated with fine steel engravings. Here at least is an opportunity for the highly-skilled architectural draughtsman, for France only has this monopoly by reason of her superior industry and skill.

We may say that geometry is the mother of architecture, yet how few study it. Read Professor Willis's paper on "Stonecutting in the Middle Ages," and see the great acquaintance there was then with it.\*

In the Arab writings, when a town or a palace is to be built, the king sends for the geometers and mathematicians, and those mysterious and intricate interlaced patterns, the real arabesques, are founded on pure geometry. Proportion is the soul of architecture, though every style gets some of its flavour from a tendency to some particular proportion.

The Reform Club is, I think, the most perfectly-proportioned building that has been built in Europe since the Italian Renaissance, and the story goes that Sir Charles Barry had the proportions of every celebrated Italian palace taken out, and took a mean for the club.

We know from Vitruvius that the Greeks had established a canon for proportioning their works, which the Roman architects imitated. We try to extract from old buildings the secret of their success, and we can in some cases obtain their proportions; but those proportions must be applied to some definite form, and it is just this definite form that we lack.

Like the fever-tossed patient, we try to get rest and ease by constant turning. We in this century have tried Greek, Egyptian, Italian; every period of English Mediæval from Norman to Tudor; Italian, French, and Flemish Gothic, Elizabethan, and the Dutch Renaissance; but no sooner have we mastered the style, and in some cases long before we have mastered it, than we abandon it for something else. This passion for change prevents us from exercising that power of modification on any style which might make it suit our wants and likings.

Our friendly but grumbling critic, Mr. Fergusson, has written high praise of us in his "Modern Architecture":—"As a body, the architects of this country have never been so numerous, so well instructed, nor so earnest in the exercise of their vocation as at present." Yet he is always insisting on his text that "modern architects do not think, they only copy," a saying seized on with pleasure by the ignorant multitude, but we know how far it is from being the case. I dare say that we think as much as architects ever thought, and copy less. I think that if you compare the buildings of one style that have been done in the last thirty years, and take thirty years either of genuine Gothic or Renaissance, you will see that the modifications of the latter are not much more than the former; although in the former case these buildings of one style have mainly been the production of a small band of architects only, while the latter were of the whole body. I shall show hereafter the absurdity of supposing that a new style perfected in every part, and precisely adapted to present use, can issue from the brain of any one architect like the armed Minerva from Jupiter's. Every architecture we know has gradually proceeded from the small modifications each age has made, and that, too, at times when more attention was paid to architecture than has been the case for the last century, when men's thoughts have been occupied with the discovery of the powers of nature and the invention of machines to utilise those powers. We must, at least, begin by modifying or paraphrasing some known style, or by applying the mouldings and parts of something we do not know to the rectangular brick box with holes in it.

If this paraphrasing of bygone styles were confined to England alone it would not so much matter, because then we should know it resulted from idleness or natural incapacity, but it extends to civilised man. France, Belgium, Switzerland, Italy, Germany, Austria, America, and Australia have nothing absolutely new to offer, so it is clear that neither race, climate, nor language can affect architecture; the defect must lie in the present civilisation.

I am inclined to believe, in spite of Dr. Johnson, that "poets

\* Transactions of R.I.B.A., vol. i. part 2. On the Construction of the Vaults of the Middle Ages, by R. Willis, M.A.



are but the tailors of other men's thoughts," and that which is true of poets is true of all artists. They are the men pre-eminently gifted with the spirit of their age, and blessed with the power of expression. If, then, the people of their time are heroic, you have heroic poetry; if the passions run riot you have passionate lyrics; if causticity and sarcasm prevail you have satire; but if the people have nothing poetical about them, the poet is driven to old themes. If the people are fat and shapeless they afford no scope for the sculptor; be they ever so beautifully made and in ever so fine a condition they will be useless to the sculptor if they wrap themselves in ugly garments that conceal their shape, and sculptors must revert to antiquity or die out. If the public care not for grace, dignity, or elegance in their habitations or public buildings, architecture dies, and dies more completely cut than any other art. Poets may sing, painters may paint, and sculptors model, but it is a rare case when an architect could afford to build even the Reform Club House for his sole use and delight.

If the public desires some sort of grace, dignity, or elegance, but does not much care what, and has no particular liking, as we have no style of our own, an old style is paraphrased till the public are tired of it, and then another style is paraphrased; in short, architecture, like the other fine arts, closely portrays the spirit of its age.

Some ancient nations called themselves "Autochthones," or sprung from the soil, and if the story of the Doric temple is true, that it was suggested by the native wooden hut of Greece, the Doric temple may be said to have sprung from the soil, and after centuries of gradual perfecting, culminated in the Parthenon. We know that the Romans with building—but as we suppose without architecture—tried to imitate that of the Greeks, and after five, six, or seven centuries created Byzantine; we know that the Normans copied as well as they could Roman and Byzantine buildings, and when touched by Arab art during the course of five or six centuries began and ended Gothic. The wave of Classic feeling that passed over Europe at first only wetted, as it were, the surface of things. The buildings remained Gothic, but with a savour of Classic; the mouldings, ornaments, and sculpture only were of Classic inspiration. Architecture then became as purely Roman as it could, and gradually losing all vitality, again made way for revived Greek and for revived Gothic. Many variations of Classic and Gothic have been introduced and practised, not to speak of flavours imported from Arabic, Moorish, Hindoo, Indo-Arabic, Chinese, and Japanese sources.

It is the easiest thing possible to imagine the throwing away of all former thoughts, traditions, and knowledge, the arrangement of buildings on purely rational principles with new and splendid effects, the whole clothed in new and beautiful proportions, adorned with new mouldings and ornament absolutely different from the past, and with figure-sculpture and painting animated by a new spirit, and that this combined perfection shall excite the admiration of the multitude and satisfy the fastidious taste of the cultivated. The only objection to this charming vision is that nothing of the sort has ever yet occurred in the history of our race. We should hear of African savages, who had heard nothing but the tom-tom, writing operas that surpassed those of Rossini or of Wagner; or North American Indians, who had seen nothing but a wigwam, erecting temples that surpassed the Parthenon or Notre Dame de Paris.

This visionary scheme was once put in practice. Brunel and Sir Digby Wyatt agreed to do the interior of the Great Western Railway Terminus on this principle. Brunel found the construction, Sir Digby the art; and every moulding was to be brand new, and no ornament was to be used as ornament, but only where necessity demanded it. You have the monument now before you of what one clever man can do.

It is admitted that without the "Iliad" we should not have had the "Æneid," nor the "Divina Commedia" without the latter; yet each had the flavour of its time.

The Gothic foliated cap is a Mediæval paraphrase of the Corinthian capital; the stellar vaulting is but the outcome of the Roman groin. We adapt our buildings to our present wants, and use the iron construction of to-day to meet our needs; and it is only when we seek to give our buildings the æsthetic flavour of the age that we fail, and I think the solution is that there is no æsthetic flavour in the age to give; the public are just affected with the slight flutterings of taste, and are beginning to think they ought to have something more slightly than the old brick box of their youth, with holes in it for doors and windows.

The twelfth century was the incubating period of Gothic; and it is quite possible that the nineteenth may be that of a new style; we have not only been gathering specimens of architecture, and architectural art from all parts of the world, but different architects, or groups of architects, have more or less assimilated the spirit of each. Let but the people of England, or of Europe, of America, or of Australia have some definite taste and desire, the creative genius arise, and all this apparent chaos may form itself into an organised shape, embodying the sum of all the art and charms that characterise each one, and proceeding to develop itself in as logical a way as Gothic did.

Maybe we have been making a bed of leaf mould—with leaves, too, from every part of the earth—from which the new tree may

spring. Although I am no prophet, it seems not so unlikely that this so-called Queen Anne style may be the germ from which the tree is to spring, adapting itself to the outline and freedom of Gothic with the Classic detail—and when I say Classic I mean excellent. Even now it does not refuse alliance with the best sculpture and painting that this age affords, as Gothic does.

The first thing wanted is for you to train and drill yourselves, and when the power of expression is attained, to observe the temper of the age, and to work out the style which will suit that temper, and seize on the budding aspirations of the age. My own notion is, that this will be found to be perfectly proportioned and graceful simplicity, almost free from ornament, but enriched with the finest sculpture and figure pictures that the age can afford. When you have done this you want to convert the nation, if the nation will then require any conversion. For if a national taste arise, you, as a part of the nation, must be imbued with its spirit, and be sure that, if you can give tongue to that aspiration, the pack will follow you. Probably there is no profession requiring so much study so poorly paid; so the architect works mainly for reputation and for fame.

Besides the hints about study that I have dropped in the course of this lecture, I want to direct your attention to the claims your art has on every age, in every nation. It is at least a lasting record of that age's taste and temper. From the durability of its works it to some extent supplies the want of those more brilliant and lasting records, eloquence and poetry. The illiterate nations of the past would be as last year's snow were it not for their architecture, and its enshrinement of the cognate arts. Let us suppose that the ancient Egyptians had contented themselves with houses, tombs, temples, and palaces of reeds and Nile mud, with all their glory and achievements, they would be as utterly gone from human remembrance as the men who built the lake dwellings. We know that Egypt must have been great, because we see how vast, sumptuous, and artistic are its structures, while its sculptures tell of achievements in war and peace. When we consider the power of our art to endue buildings with sublimity, grace, elegance, beauty, or even with appropriate gloom or horror—when we consider that our art is enshrined in buildings of vast size and of long endurance—when we consider, too, that they reflect the character of the age in which they are built—I cannot for a moment doubt that architecture is worth living for, although I must admit that we are at this moment beset with so many depressing influences that it is not surprising that some of us are tempted to despair—to throw aside our high aspirations, and to see if we cannot win in the race for fortune when we have lightened ourselves by throwing away the desire for fame. But I say, despair not; black and tempestuous as may be the sea on which you are about to venture, let your courage and endurance rise superior to the danger, and some of you at least will weather the storm. I believe that no good piece of work is ever thrown away, but even if you can do no more, you will help to hand down the tradition of your art unimpaired to happier times and more sunny days.

Master the art of architectural expression, master construction and arrangement, master a cultivated style, and then set yourselves to really adapt it to present requirements. Cut off all the redundancies, all that is not called for by actual needs, either practical or æsthetic; recollect, too, that iron must enter even more largely than at present into every building that is not of the most modest size. Consider that though the bones of the mammal are ghastly they are hidden, and that the bones of the crustaceans are outside. Nothing, for instance, can be more elegant in treatment than the shell of the king crab. Mountains, rivers, rocks, and forests, all abound in lessons for the architect. Every leaf and every plant may give him inspiration for a form, a moulding, or an ornament.

Reputation, honours, and fortune are the prime movers of the second-class spirits of the world; and if we do not wish mankind to relapse into sloth and barbarism, we should do what we can to uphold these incitements to exertion, and not let the envious, the dull, and the brutish abolish them, in the hope that when all are reduced to the condition of swine, they will be indistinguishable from the rest of the herd. Higher motives, however, have actuated the noblest of our race; men of brilliant genius and overwhelming power have devoted themselves to the good of the world, of their country, or their creed, for no greater meed than bare subsistence and a sense of duty. It is this spirit that I want you to adopt; perfect yourselves in your art, and then preach a crusade against the apathy and tastelessness of our age, and so confer on your country and your art a benefit of incalculable value. Did I not think this reward coupled with the feeling of having done one's duty was so much higher than any other, I might have pointed out the cases where pious monks, with no aims but the improvement of mankind, have ended their lives as popes.

The PRESIDENT said he was quite sorry when Mr. Aitchison came to the end of what he and all present had listened to as a most charming and delightful lecture. He was pleased to hear Mr. Aitchison's remarks and advice as to drawing in relation to architecture, and that he deprecated the practice of sketching a building or its details without learning how the effect shown in the finished building had been produced.

Mr. STANNUS proposed a vote of thanks to Mr. Aitchison, and said that they owed it to Mr. Aitchison more than to any other



person that iron, as a building material, was likely in the near future to have a fair trial given to it by architects.

Mr. HILTON NASH seconded the vote, and said the leasehold system seemed to be peculiar to the South of England, and that the further north you went, and in Scotland, houses were better and more solidly built. Knowing what Mr. Aitchison had done in respect of ironwork, he had hoped to hear something in regard to it.

The vote was carried by acclamation.

Mr. AITCHISON, in alluding to the hearty reception that had been given him, and the kind and complimentary words that had fallen from the speakers, said he did not think he could have been induced to give a lecture to anyone but the Association, and it was a great delight to think that anything he had said would produce a useful effect on architects coming after him, and who would he hoped be far more distinguished than himself. He had wished to arouse their enthusiasm. It would be an advantage if we had one style, though not a style so rigidly treated as to be called a cast-iron style, but something that, while it might vary in treatment, should at any rate express the general taste of the people of the country. If they would study, and if they would endeavour to give expression to their ideas, the problem might eventually be solved. If any act of ours could do it, it would only be by the younger men devoting themselves to the work with a singleness of purpose that would despise the things and motives that moved the ordinary run of mankind. And then, until they got the public to know what they wanted, and as long as clients did not care something for style, the prospects of architecture seemed to him to be bad. Those who had spoken had complimented him in regard to iron. That material was pressing itself forward, and would, there was no doubt, be more and more used till some other material still more suitable were found. One great difficulty was the liability to drip, and consequently girders were rather apt to be cased over to look like wood. Style, however, Mr. Aitchison said in conclusion, was not invented by one man, but must be the outcome of the tastes and feelings of a people, even though the movement might be led and controlled by some one master mind.

### THE INSTITUTE AND THE PROVINCIAL MEMBERS.\*

I HAVE before made allusion to the systematic and continuous neglect of the country members. To that part of the question I will return for the sake of dealing with one or two other points, beyond the grievance mentioned of the lack of representation on the Council. It cannot be alleged that the interests of the country members were neglected because their existence was accidentally forgotten. That lapse of memory only took place when changes were to be made or honours to be distributed, never when funds were wanted and increase of members were sought after. The records of the Institute repeat one continuous complaint of the lack of provincial members, of the way in which they held aloof from joining the Society. But the records are silent always as to any means being taken to make it worth their while to join, of any effort being made to place them on an equality with the London men. They are prolific in promises, barren in fulfilment of them. That the Institute should amongst its members count more than a third of provincial men is marvellous, considering the treatment that has been dealt out to them.

It is now seven years since the subscriptions of London and provincial members were equalised, an implied promise being inserted in the President's address that an attempt would be made to increase the influence of the provincial members, and to afford them additional advantages corresponding to the new taxation they were compelled to bear—a promise, it is needless to say, that was promptly forgotten when the financial juggling trick was successfully accomplished. Of flattering we have had enough. We demand a food more substantial than the windy utterances that for years have done duty for the attentions we have a right to call for. With a solitary exception or two, so rare as to need most careful research to discover, no country members have served on the many committees appointed at different times for various purposes. Take the later ones only. The Examination Committee, which settled on the scheme for compulsory examination of Associates, was composed wholly of London men. The Architectural Competition Committee of twenty-two members did not include one provincial name. At the present moment the provinces are unrepresented on the Professional Practices Committee, the Special Light and Air Committee, the Committee for Conservation of Ancient Monuments and Remains, the Finance Committee, and the Library Committee. The first of these—the Professional Practice Committee—is a dead letter without proper provincial representation. This body makes rules, and the Council proclaims the necessity of discipline amongst members of the Institute, and that all should comply with the regulations made. This is impossible when they are drawn up by one section only of the

profession—that, too, the smallest, regardless of the opinions and wishes of the majority. The demand, under present circumstances, is an intolerable one, and cannot but be scouted as unreasonable and absurd.

The Institute has too long been a mere clique of London architects—a private club of metropolitan Fellows, whose aim is peace and profit for themselves, and who would fain be left to the enjoyment of the preprandial chat round the Council board, and the agreeable dinner which follows, the enjoyment of which is so much enhanced by the feeling that they have previously satisfactorily disposed of the business of the head organisation of English architecture. The clique must be broken up, the Metropolitan Vestry Board of the profession dispersed, and a Council elected that will be representative of the nation, and not of a mere city, however important and cosmopolitan that city may be. An infusion of the robust common sense of the North, with even something of its rude outspokenness, that says plainly out the true definition of the vacillation and feebleness that has for fifty years characterised the work of the Institute, would be invaluable and must be brought about. Its policy of meddling and muddling is inevitable. It cannot be otherwise. It affects to speak for the country, and knows nothing of the practice and feelings of architects outside the cab radius of London. One monotonous recurrence of inadvised advance and inexcusable retreat makes the record of what it has mainly done for architects. The Council of compromise must make way for the Council of courage. Of promises and fair words we have had enough; of acts of justice and fair play none. The hands are the hands of Esau, but the voice is that of Jacob who stole his brother's birthright.

To conclude remarks already too long, it may be inquired, What do country members in particular demand? To a great extent an answer has already been given to such a question; but there is one thing in particular which carries within it the possibility of all the others. That is a vote by proxy. Without that, all idea of justice to provincial men, of giving them any share in the control of things, is mere nonsense. No influence can be wielded by country members without it. The existing need of the presence of those who vote simply deters any but Londoners from ever troubling their heads about the affairs of the Institute. The vote, through which alone they can make their influence felt, is too expensive a luxury for any but men of abundant wealth. Let me give an example—my own. Last year I was anxious to exercise my right of franchise in the question of a diploma. Twice I specially journeyed to town for that purpose, and each time, without notice, the matter was adjourned. Assume, which I have no grounds for doing, that the ballot is taken the next time the question is raised, and that I am foolish enough to try once more to be present as a voting Fellow of the Institute. Let us see what that vote will have cost. Three railway journeys to town, at 2*l.* 10*s.* = 7*l.* 10*s.* Three days' hotel expenses at, say, 15*s.* = 2*l.* 5*s.* Three days' time, at 5*l.* 5*s.* = 15*l.* 15*s.* Altogether, the sum of 25*l.* 10*s.* as the cost of exercising the franchise by a country member at the Institute. There is no need to enlarge upon the bare statement of fact, and no need to ask why provincial members take so little interest in an organisation in which they cannot reasonably make their influence felt.

The position taken up by the Council has always been that to grant this demand for voting by proxy would be to run counter to the plain directions of the charter. I venture to say that it would not. And I venture to say, too, that the charter has never yet stood in the way of the Council when they wished to break through its clauses. They could stretch their consciences sufficiently to do this when they desired to establish a new class of members under the name of Honorary Associates, in direct defiance of the words, "And our will and pleasure is and we further grant and declare that the Institute of British Architects shall consist of three classes of members, to be respectively called, 'Fellows,' 'Associates,' and 'Honorary Fellows.'" They wanted the guineas of a new class, and no charter was allowed to stand in their way to prevent them getting these. The Council in 1877 got, by fair promises, the guineas of the provincial men; but they have no wish to give them their right to vote, lest they should be speedily called on to dance to a tune that would not be of their own selection. In 1858, the then President, Earl de Grey, along with other members, offered to the Institute shares in the Architectural Union Company. To hold these was distinctly illegal; yet the Council had no difficulty again in over-reaching the law for the sake of gain, the secretaries being put up as the nominal holders, and to represent the Institute. On another occasion the Council desired to alter the mode of election of Fellows so as to require a majority of four-fifths of the votes given to entitle to success—a proposal so clearly contrary to the letter and the spirit of the charter that the consulting solicitor at first plainly ruled it to be inadmissible. A second attempt to persuade their solicitor to more obliging manners was victorious, and he decided that the mention of a bare majority in the clause of the charter was only intended to apply to *general* meetings and to Council meetings. Ordinary or sessional meetings, on the other hand, not being mentioned in the charter, were not, therefore, considered subject to the clause.

The Council profess to feel acutely the difficulty which prevents

\* From an address by Mr. J. W. Connors, F.R.I.B.A., read at a meeting of the Leeds and Yorkshire Architectural Society on the 17th inst.



their granting to country members the right of voting by proxy. Here is a clear way out of the block. General meetings called for the election of officers are subject to the regulations of the charter; ordinary meetings, by the decision of the Institute's solicitor, by the acquiescence of the Council, are not. Let all matters of importance be decided by ordinary meetings, which are not controlled by the charter. Let general meetings for the election of officers, which are, be preceded by an ordinary meeting, at which votes by proxy will be received, and which will decide in that way what names are to be submitted for formal acceptance by the following general meeting. This plan is simple, is perfectly legal (or else the Council have been acting illegally for years back), and permits of the exercise of voting by proxy, which is the chief demand now made by country members. The proposal is so convenient that it is astonishing the Council should never yet have seen so easy a plan for granting a boon which they claim to have been anxious to give to provincial members. If an ordinary meeting has the right to act contrary to the charter—and the Council say it has—there is no reason whatever why an ordinary meeting should not decide what names of officers should be submitted to the general meeting, and the general meeting certainly cannot elect officers against the voice of the ordinary one if only a sufficient number of names to fill vacancies are submitted to it. All other questions of importance outside that of electing officers need never come before any other than ordinary meetings, and, as voting by proxy is admissible at these, they not being under the charter, the whole question rests with the Council. If they still find a way by which to avoid giving this just right to country members, it is because they seek not to grant it, but to discover some plausible excuse for not doing so.

My indictment of the Council is by no means complete, and has omitted mention of innumerable sins of omission and commission. If the list of these is not exhausted, your patience must be; and I have, I think, said enough to sustain my position. It will be urged that I heap up blame too deeply on the Council, and that no amount of zeal or skill could have achieved all that I appear to demand from them. That it is too much to expect that all the reforms in the profession which I have incidentally mentioned should be brought about, I at once freely admit. But so long as none of them have been seriously attempted, I am justified in blaming them for the want of any. The policy of the Institute, from the day of its foundation to the present time, has been that of shelving all inconvenient questions, of adjourning all serious work, of shirking every great difficulty. Beyond all other matters it is deserving of the reprobation of all true architects for the deliberate way in which it has ever permitted itself to remain weak and unimportant when it might have been strong and powerful; to be despised and neglected when it might have been venerated and courted; by passively allowing itself to be a vestry when it might have been a Parliament; to remain a private club when it might have been a national institution. This is the head and front of its offending, the source of its weakness, the cause of its comparative failure. Whilst our venerable leaders are engaged with feeble playfulness in debating worthless questions, and with nimble alacrity are adjourning with prompt delight all matters of real importance, the tide of popular contempt is rising with unchecked and pitiless regularity. When the forefront of battle has no firmer rank than an array of ancient dotards, and bearing, with palsied hands, forgotten weapons, meeting the mitrailleuse of their opponents with the cross-bow of their forefathers, and forbidding their eager followers to make use of modern arms because these have not the dignity of long descent, the value of archaeological interest; when in impotent attempt to maintain a brave show of dignity, on fear-stricken limbs, they make a brave show of defiance but to conceal the feebleness of their position, and to maintain the poor dignity of unmerited leadership, can we wonder that they try to attain their objects by unlimited surrender? The right to an extended knowledge of scientific construction, to the execution of the greatest of modern constructional achievements is surrendered to the engineer. The right to an intimate acquaintance with the framework and essence of building is surrendered to the quantity surveyor. The right to the execution of the national works of the age, the monuments of the nineteenth century, is surrendered to the Board of Works. The very right to criticise a modern street is surrendered, as the last feeble gift of powerless incapacity, to a metropolitan vestry. What is left yet to abandon to the acute enemy who waits without the camp for what poor remnant our purblind Council would yet retain? It is but little. The modern architect is but a designer of wall-papers and country houses. The works which command the admiration of the passing wayfarer have been the creation of others who have had less claim by far than ourselves to their execution, but who have, by dint of sheer effrontery on their part, and imbecile weakness on ours, carried off prizes within our own reach and right. They do it, too, with an open scorn and contempt which the attitude of our leaders has justified them in assuming. It is but months ago that the Israelites of quantity surveyors marched around the Jericho of the Institute blowing for three days their own trumpets, and, though their only weapons were wind instruments, and they encompassed the city round about with their own ineffable self-sufficiency, lo! as they shouted with a great shout when the priests

blew the trumpets, the walls straightway fell down and every man entered in and took the city, and the fame of the quantity surveyors was noised throughout all the country. It was but an episode in the later history of our Central Society—the last sop given in futile hopes that the foes themselves might support the weak hands and maintain the feeble knees of those who are bravely obstinate when diplomacy might serve their turn, and panic-stricken cowards when courage would win the day.

It may be assumed that I have no right to blame the Institute for the position of architecture to-day. I cannot concede the point. The Council stand as the recognised exponents of our professional position to the public. As such they must accept the blame if the profession loses ground before the outside world, even as they would arrogate to themselves the praise if the reverse had been the result of recent years. Scant respect must be the inevitable result of the contemptible exhibition of feeble vacillation which the transactions of the Institute disclose. The burning question of competitions with its intricate difficulties, and its corresponding importance, is handed over to be dealt with by a committee outside the Institute, the Council only interfering to insert a mischievous and uncalled-for clause, and so its plain duty is cheaply shelved. The duty of maintaining some show of student education from year to year met with recurring neglect, till a new organisation took up the work so shamefully forgotten, and by its vigour and energy struck a success that might have been the Institute's years before, and showed that the profession had within it a life and earnestness wanting only leadership to be animated into concrete activity. The universal demand that our profession should be brought up to the level of others, by the institution of some qualification marking the capability of each member of the Institute, was met by a ridiculous half measure, which closed the doors of the inferior grade of membership, and threw wide open those of the superior to every charlatan who assessed the value of the title of Fellow at four guineas per annum. When contemptuous indignation covered with confusion the absurd attempt to set up a diploma foredoomed to ridicule by the very action of its promoters, the Council scared themselves like children with a legal bogey, built up by their own ingenuity out of an ambiguous phrase in a worthless charter, and shook their ghost of conveyances, parchment inflated with their own fears, as a justification of their failure to fulfil an admitted responsibility.

Vacillation and procrastination: these are the special characteristics of the Council. Questions of the gravest importance have been before them for years, till every conceivable resource of prevarication has become exhausted in the endeavour to adjourn without rejecting them. Such is not the conduct likely to forward the interests of an important profession, and to maintain the dignity of the Institute before architects or in the presence of the public.

Where lies the remedy? Certainly not in inaction or toleration. Whatever its faults and failings, the Institute is and must be the centre of English architecture. To weaken it by secession or abstention is to damage the general interests of the profession. The only course, it seems to me, is to join it in numbers sufficient to make the provincial element strong in proportion to its numbers; thus to make it truly national and representative. Then agitate for the right of voting by proxy until the right is forced from the unwilling Council, and then to "Shape our ends, rough hew them as they may."

#### BUILDING BY-LAWS IN MANCHESTER.

A PAPER on "The Building By-Laws" was read by Mr. J. Holden, President of the Manchester Society of Architects, at the last monthly meeting of the North-Western Association of Medical Officers of Health. Mr. Holden said that the condition of numbers of the dwellings of the poor had of late years been considerably improved, although in some parts of Manchester they were bad enough yet. The authorities, both there and elsewhere, had taken up the matter, much money had been spent, and, in places, whole districts had been swept away and remodelled. Generally speaking, the authorities deserved great credit for what they had done, but much yet remained to be accomplished, and they required to be kept up to their work. Before, however, the authorities could act, they should have power to act which should be unmistakable and within the knowledge of all. In Manchester, for instance, the by-laws did not represent anything like the authority of the Corporation. The by-laws of the different local boards and sanitary authorities were in quite as unsatisfactory a condition, and further inconvenience arose from the fact that each authority compiled its own regulations seemingly without reference to any others. Mr. Holden pointed out various anomalies which obtained under this system as to width of streets, thickness of walls, dimensions of timbers for joists, yard space at back of buildings, height of rooms, drains, &c. In addition to all the matters in house construction over which the authorities had supervision, Mr. Holden urged that the character of the materials, and also the workmanship, should, in some cases, be subject to control, but that it should be open and above board and clearly defined. Looking at the character of a vast quantity



of the property which was springing up, he would rather increase than control the powers of the authorities in the right direction. The by-laws in Manchester were particularly meagre in detail, and a great deal of the information required, in fact most of it, had to be obtained verbally by application to the different surveyors. It would appear to be the desire of the Corporation not to make public the powers with which it was invested, at least that was the view to which he, and, he believed, the members of his Society, had come. The sooner the by-laws of local boards were amended and made more in accordance with the model code issued by the Local Government Board the better, above all things letting it be borne in mind that they should be made as full as possible, so that the public might know what was required of them, and leaving as little as possible to the discretion of surveyors or inspectors, who were not always specially educated. Generally it appeared to him that there was a disinclination on the part of the different authorities to apply for advice or suggestions to those who, from their knowledge of the questions involved, could give it to them, and the different societies whose suggestions might be expected to be of use seemed to be systematically ignored. Speaking for the Manchester Society of Architects, it was, he was sure, their desire to render every possible assistance in such matters. A discussion followed, in which the importance was insisted upon of supervision in the matter of quality of materials used, every regulation at present pointing to dimension only.

### THE RESTORATION OF WESTMINSTER HALL.

THE Select Committee appointed by the House of Commons to consider the question of the restoration of the west front of Westminster Hall met again on Tuesday, Mr. G. Shaw-Lefevre (late First Commissioner of Works) presiding. The other members of the Committee present were:—Mr. Beresford-Hope, Mr. Dick Peddie, Mr. Walter, Mr. Cheetham, Sir H. Holland, Sir E. Reed, Mr. W. H. Smith, and Sir J. Lubbock.

Mr. Charles Barry, architect, was called to explain his father's views with regard to the completion of the scheme of the Houses of Parliament. The restoration of the west front of Westminster Hall had been under consideration for a long period, and witness was surprised that his father's proposal for the construction of buildings on that spot had not been taken into account. He now came forward to explain that proposal. He had not done so earlier for the reason that while the Office of Works confined itself to only one plan, he had considered it unprofessional to attempt to interfere with the discretion of the First Commissioner. It was only when the House of Commons, with the concurrence of the First Commissioner, agreed to consider the matter more broadly that he had thought it his duty to his father's memory to ask to be allowed to submit the original proposal to Parliament, and to leave with Parliament the responsibility of omitting to carry it out or the reverse. Witness had been for some years engaged in architectural work with his father—from 1841 to 1847—and subsequently on his own account. During the years he was with his father the Parliament buildings took their permanent shape, and he was thoroughly conversant with his father's views with regard to the completion of the structure. They were to start with a façade from St. Stephen's Porch, following a line from St. Margaret's Lane to the corner where Bridge Street, Great George Street, and Parliament Street intersected each other, to construct at that corner a great gateway, and carry another new façade from that point to the clock tower. The idea had been to give the whole building as much dignity and unity as possible, to conceal the difference of level between Bridge Street and the entrance to Westminster Hall, and in possible times of tumult to give an effective protection to Palace Yard, Westminster Hall, the Speaker's House, and the House of Commons. Sir Charles Barry had attached great importance to having Palace Yard enclosed; he was thoroughly acquainted with the history of Westminster Hall with respect to its exterior, being decidedly of opinion that it was never intended that it should be seen; and he had always been of opinion that the space then occupied by the law courts had been devoted in earlier times to the inferior offices of the old palace.

Mr. Shaw-Lefevre asked whether Sir Charles Barry had left behind him any documentary evidence of his opinion upon the former appearance of the west front.

Mr. Barry replied that probably he had, but no search had been made for it, and the present evidence was, therefore, founded upon a personal recollection of the architect's views.

Mr. Shaw-Lefevre said that, substantially, Sir Charles Barry's plan was to erect a new wing or frontage to the Houses of Parliament, joining Westminster Hall at St. Stephen's Porch, running to the corner of Parliament Street, and from there joining the clock tower.

Mr. Barry acquiesced, adding that his father had left the lower face of the clock tower unfinished in brick, and that the brickwork had not been covered with stone until Mr. Ayrton's period of office as First Commissioner of Works. No doubt the carrying out of Sir Charles Barry's plan would affect the roadway between the site of the old law courts and St. Margaret's Church, but the plan could be easily modified to prevent any incon-

venience. The court would be reduced in size, but it would still be large enough. If a cloister were erected at the west front of Westminster Hall, it should only be of one storey. He did not agree with Mr. Pearson that it was proper to leave Westminster Hall exposed as a foil to the Houses of Parliament; on the contrary, he believed that so leaving it was injurious to the dignity of the whole building. The proposed building at right angles with Westminster Hall would be quite inconsistent with any realisation of his father's plan. The latter contemplated the hiding of Westminster Hall from outside view; it would be absorbed in the building. He did not think his father raised the floor of the hall, and, therefore, altered the internal proportions. He was sure there was no elaborate scheme for the raising of the floor or roof of the hall. His father altered the west front of Westminster Hall, and he would not have hesitated in altering the east front if he thought he could have improved it.

By Mr. Walter: He did not think that the level of the floor had been altered within the memory of man. Although Westminster Hall was the finest structure of the kind in the world, it was still low in proportion to its width and length; he should have liked, as a matter of taste, to see it 10 feet higher. He was not aware that the weight of the roof had ever been estimated. If at any time it was decided to raise the roof, the operation would, in all probability, be completed by means of levers and screwjacks.

Replying to Mr. Dick Peddie, Mr. Barry said that if his father's plan were carried out it would be found to provide quite as good, indeed better, accommodation than Mr. Pearson's plan provided. Witness had studied all the old plans which existed, and he shared his father's opinion that Westminster Hall was not intended to be seen from the exterior. He certainly should not think of proposing, as was suggested by Mr. Pearson's plan, that there should be a grand committee room, or a meeting room of any kind, above a standing-place for horses and other conveniences.

Mr. Beresford-Hope: Supposing Mr. Pearson's plan were rejected, have you a plan you could propose for us more or less similar in principle to your father's plan, but nearer in cheapness to Mr. Pearson's?

Mr. Charles Barry: If I had been officially asked, I should have been pleased to have prepared one. I, however, think my father's plan would be cheaper in the end. It is certainly better to spend half a million upon a building which would be thoroughly useful than to spend 25,000*l.* upon a structure that would be useless.

By Mr. Shaw-Lefevre: Mr. Pearson gave very good reasons for supposing there was originally a double-storeyed cloister on the western front of the hall. Witness, however, considered that modern requirements were of more importance than the reproduction of the old state of things. Failing the adoption of his father's plan, he should suggest that there should be, if anything, a one-storeyed cloister under the buttresses.

Mr. Somers Clarke, architect, said, in reply to Mr. Dick Peddie, that he had for a long time taken a deep interest in archaeological matters, and last year had read a paper before the Society of Antiquaries on the subject of the west front of Westminster Hall. He had examined the site and the hall as it at present stood, and, though he agreed with Mr. Pearson as to the dates of the archaeological remains, he could not support that gentleman's view as to the character of the ancient building which had occupied the site. Mr. Pearson's restoration could not be based on authority, and any architect undertaking the work of restoration must be almost entirely guided by his imagination. Mr. Pearson in his plan gave a wall where undoubtedly a wall had anciently existed, and a parapet where there had been a parapet before, but beyond this, and for the details of his proposal, he had no authority. The building proposed to be erected at right angles with Westminster Hall was confessedly unauthorised.

Mr. Shaw-Lefevre remarked that Mr. Pearson had never proposed to give an exact restoration of the ancient building.

Mr. Somers Clarke said his own impression was, judging from the earliest illustrations they had, that originally there had been a wall running round the western side of the hall, and that inside that wall there were a number of buildings which shut out all the west front of the hall, save the roof, from view.

By Mr. Shaw-Lefevre: He would himself propose that the old Norman wall of the hall should be preserved by a covering which would as little as possible falsify the character of the old building. The marks of the Norman masons and the old stonework were of great historical interest, and should by all means be preserved, and the covering he would propose would be a long timber gallery—such as was to be seen in Cheshire—under the flying buttresses, and 8 or 9 feet from the hall. Sir C. Barry's designs for the completion of the Parliament buildings should then be carried out. He did not believe it had ever been intended that the west front of Westminster Hall should be seen. If Sir C. Barry's design were not carried out, the gallery, witness suggested, should be constructed, and should be shut out by a row of trees.

In reply to Mr. Walter, witness stated that "restoration" was a vague term, and so-called restorations were sometimes carried out in a conventional, and not in the strictest sense—carried out to the destruction of the architectural value of the buildings.

The Committee again adjourned.



## YORK ARCHITECTURAL ASSOCIATION.

ON the 20th inst. a lecture was given in the saloon of the Victoria Hall, Goodramgate, by Mr. G. W. Milburn, vice-president of the York Arts Guild, and there was a good attendance. The president (Mr. A. Pollard) occupied the chair. Mr. B. Priestley Shires, the hon. secretary, drew attention to the question of an architectural diploma in architecture being granted to all *bond-fide* architects, and trusted the society would discuss the matter thoroughly at an early date and forward the Royal Institute of British Architects a memorial to that effect, as there were in that distinguished body Honorary Associates, members of the Legislature, and for that reason, as well as others, it would be more easily worked through them, and concluded by saying that he felt sure this great question would be settled to the satisfaction of all true architects. Mr. Milburn, in the course of a very able lecture, and by means of many rapid sketches on the black-board, fully elucidated the study of the ornamentation of the Early English period of architecture, pointing out, by the way, the numerous ways the trefoil, the quatrefoil, and the cinquefoil leaf was adapted to every prominent feature of the building, and concluded by laying great importance to the junior members of the Association of modelling. The President, in thanking Mr. Milburn for his lecture, trusted that they would have the presence at no distant period of Mr. Milburn to continue the subject through the subsequent styles. Mr. Benson seconded the vote of thanks, and Mr. Norman R. Yeomans and Mr. J. Perry supported the vote, which was carried. Mr. Milburn, in responding, said it would give him great pleasure to accede to the request of the President. It was announced that the annual grand conversation would take place in the water-colour galleries of the Yorkshire Fine Art Institution on Friday evening, December 5. Mr. W. D. Grave was duly elected a member of the Association.

## GLASGOW ARCHÆOLOGICAL SOCIETY.

A PAPER on "Some Archaic Types of Society in Scotland" was read by Mr. G. L. Gomme, at the twenty-eighth annual meeting of the Glasgow Archæological Society. The author said that if he were asked to name a nation of the Western world which had retained more archaic life to within the time of scientific observation he might perhaps fix upon Russia, with her vast unbroken clan communities, with her still uncommercialised villages and villagers, taking first rank, but he should certainly mention Scotland in almost the same breadth. In Highland and Lowland Scotland had existed a state of society which had not broken up at the dawn of the present century, and which still retained in isolation what was once generally prevalent. The chief characteristics of archaic societies were—(1) relationship of all the members, either actually or in theory—*i.e.*, the clan or tribe; (2) the gradual displacement of kinship, as the basis of cohesion, by land—*i.e.*, the village; (3) the ownership of the land and all except personal goods by the community, and not by the individual; (4) the periodical, generally yearly, division of the arable land by lot to every owner of a tenement; (5) the common right of pasture; (6) the general community of interests conveyed by the legal axiom, "Joint in food, worship, and estate." After referring to the peculiarities of the burghal community of Lauder, in Berwickshire, the speaker said that an exactly similar case was to be found in the village of Kilmaurs, in Ayrshire, which was erected into a burgh or barony by James VI. The land of the barony was divided into five-pound lands of 240 acres, such lands being disposed to forty different persons in feu farms and free burghage, and to be held in equal proportions by their heirs and successors. The mode of holding this was by "runrig," and there was in the course of time a possibility of this becoming one property. Every man who was elected a magistrate must be a portioner, as must also the electors, and no woman could succeed to an inheritance in such burghs or marry without a special license. This was the archaic type of village life, where the right of succession was based upon kinship, and where, if the right of succession failed, the land reverted to the community. After alluding in detail to some peculiarities about Newton-on-Ayr, Mr. Gomme directed attention to archaic types in the Highlands, instancing particularly the types to be met with in the island of Harris in 1795. Summing up his instances, he said he thought there was evidence enough of two distinct types of archaic society in Scotland—the village community in Lowland Scotland, with village rights, village law, village assembly, and all the incipient institutions which might develop into burghal towns of commercial importance; and, secondly, the tribal community, joint tenancy as they had become now, of one landlord, clustered into houses which made a farmstead, and possessing in the so-called cottar-towns dependent servants, whose labour belonged to the farmstead. In order to show that the tribal community was far more ancient than the village community, he directed attention to the dependent cottar-towns of the Highland tribes, and he pointed out that village life was only possible when trade had already taken an initial

step. He also pointed out that the Skye crofter, in dividing his land into patches and shreds to afford a separate dwelling for each son and daughter who married, was only obeying the old tribal custom of gavel. Traces of this and its differentiations were numerous, and were extremely important for the right understanding the inner life of tribal and clan society. To these subjects he would direct the attention of archæologists; and he believed Scotland must be full of clan folk-lore, which would be well worth following up.

## CHURCH PLANNING.

A LECTURE was delivered to the members of the Glasgow Architectural Association, on Tuesday, by Mr. John Honeyman, F.R.I.B.A., on church planning. Mr. Honeyman said it might perhaps be thought that, as there was a very large number of different sects, there must necessarily be a great many different types of church plan, but this was not so, as the peculiarities of the sects came out for the most part in their furniture, occasionally in their millinery. Even the proverbial "barn" of the strictest sect of the Presbyterians might, by the introduction of the appropriate upholstery, and the mystic words of consecration, be transformed into a temple where the "highest" of the Ritualistic priests would not disdain to worship, and, in point of fact, many of the older churches in London and elsewhere were not so well adapted for the Episcopal Ritual—for which they were designed—as the new Presbyterian church in Pont Street, lately designed by Mr. Macvicar Anderson, or such churches as Blythswood, Camphill, Woodlands, Hillhead, and others in Glasgow which might be named. He defined a church as a building designed for use as a place of worship by any denomination of Christians. He remembered the time when all such buildings—except those belonging to the Established Church—were called chapels, but now we had not merely Free Churches and U.P. Churches, and even Unitarian Churches, but Roman Catholic and Episcopal Cathedrals—which, he ventured to think, was just a little too much of a good thing. At all events, under existing relations between the Church and State, there seemed a palpable impropriety in the public recognition of such assumptions, and the dignifying of Dissenting chapels by a title which some would withhold from the venerable High Kirk. All churches had some characteristic in common of much more importance than their accidental peculiarities; and he purposed confining their attention to these under two heads—First, convenience; second, comfort. He would not add beauty, because he maintained that so far as that depended on the planning it must be made subordinate to the other two. It would be a shame not to make a church beautiful, but the primary requisite was shelter, with convenience and comfort. Having ascertained what was best, they should clothe it with beauty, and remember that they were not civil engineers, but architects. Under the first division of this subject, Mr. Honeyman spoke of form, access, arrangements and accessories. He said that a cruciform plan was bad acoustically, and the shorter the transept the worse was the effect. A church with side aisles was objectionable, unless the aisles were used merely as passages. Referring to access and egress, he said that a great many other things had to be considered besides the mere width of the doors. In a large church a great deal would depend on their position, the size and form of the porches or lobbies, the width of the passages and stairs, the way the doors were hung and fastened, and the arrangement of doorsteps and stairs. For example, while it was convenient to have only one door of ingress, it was insufficient and inconvenient to have doors of egress only at one end, even if of ample width; and he need hardly say that it was equally inconvenient when there were doors at both ends to keep those at one of the ends always locked—not at all an unusual thing. Referring to the introduction of organs, he objected to an organ being set up at the end of a church, as if it were the idol of the place. At the same time height above an organ was indispensable, and a side aisle was as a rule too low. When speaking of accessories, he recommended that there should be two roomy cloak-rooms, with attendants to take hats and cloaks; and also that the heating apparatus should be kept constantly in operation throughout the winter, as the surest method of preventing disagreeable draughts. Upon the whole, he thought the most comfortable form of auditorium was something in the form of a modern theatre. There was nothing shocking in that idea, except to inveterate prejudice, from which they were bound to shake themselves clear if they would not abdicate their proper position as moulders of public opinion in matters of this kind. With a thoroughly good, beautiful, and perfectly comfortable auditorium, everything else was simple, and stage accommodation, with furniture and properties of every kind, could be easily made to suit the requirements of any sect. Mr. Honeyman recommended his audience to look at the subject from an enlightened, unprejudiced standpoint—to think for themselves.

At the conclusion of the lecture, after some remarks by the chairman and members, a vote of thanks was awarded to Mr. Honeyman.









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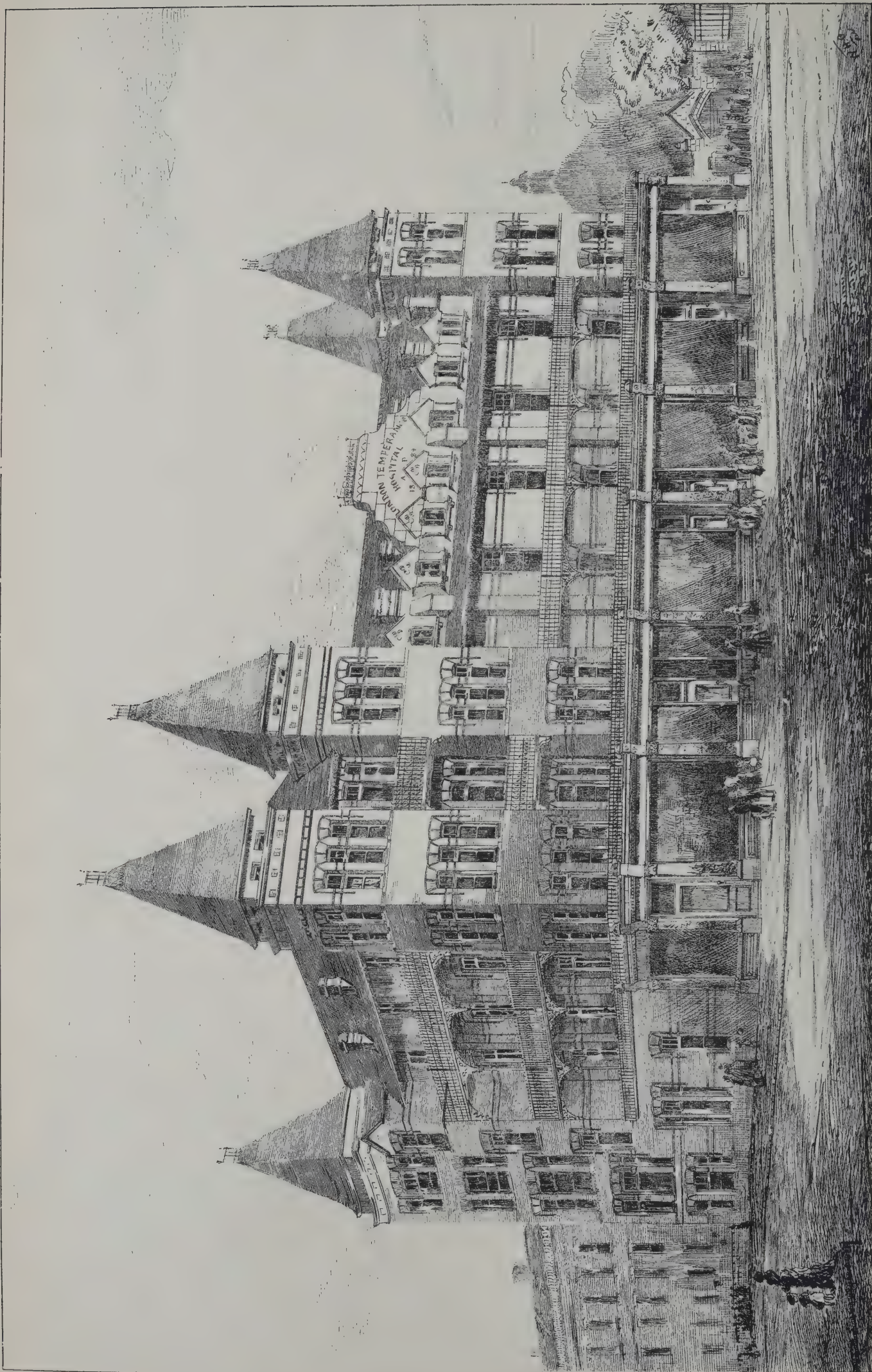












THE LONDON TEMPERANCE HOSPITAL.  
SAMUEL BURBRIDGE, ARCHITECT.



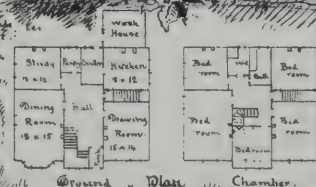
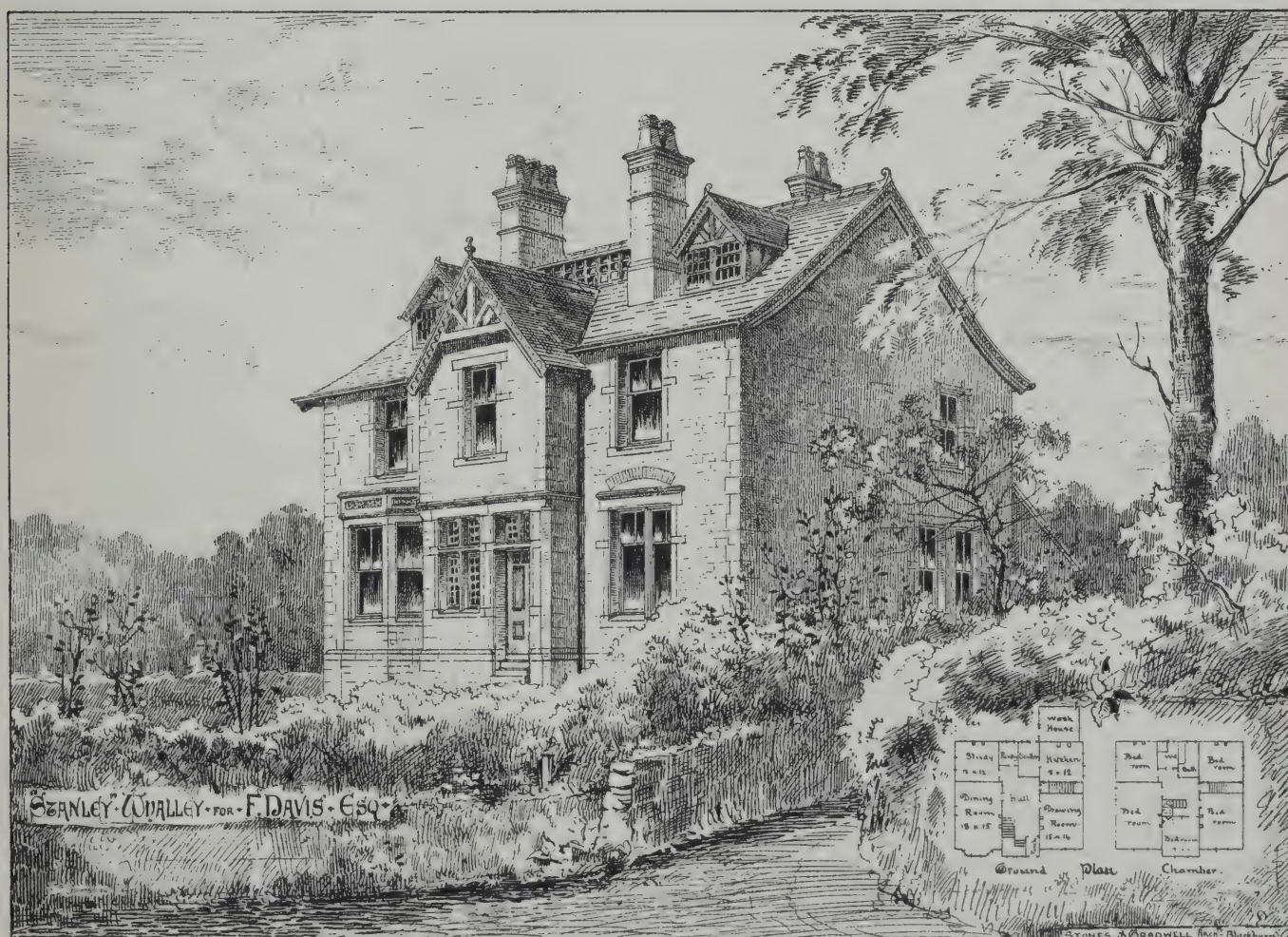


DESIGN FOR A MOOR-SIDE CHURCH.  
HERBERT W. BOOTH, ARCHITECT.





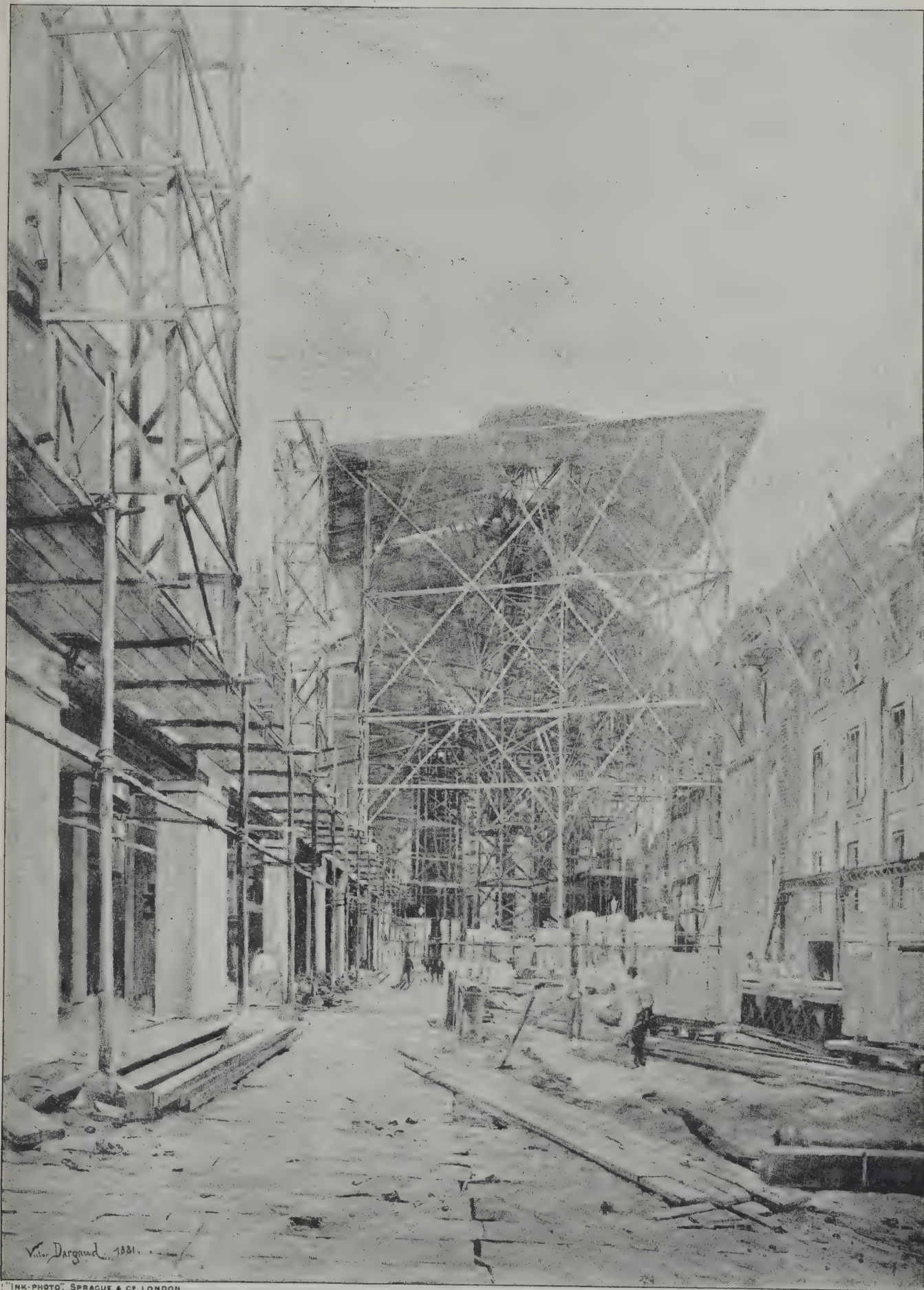












V. Dargaud 1881.

"INK-PHOTO", SPRAGUE & CO, LONDON.

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FROM THE PAINTING BY M. VICTOR DARGAUD.







## ILLUSTRATIONS.

DESIGN FOR A MOOR-SIDE CHURCH.

THE arrangement of this church is uncommon, being designed to meet the difficulties of a very steep site, and the requirements of a building of combined and varied purposes. The plan comprises a nave (40 feet by 18 feet) with north aisle (40 feet by 10 feet), these being seated for the accommodation of a congregation of about 200 persons; north and south transepts, the former utilised as an organ-chamber, with vestries at the rear, and the latter being devoted to the uses of a founder's chapel. The central tower would rise over the chancel, this terminating in an apse. The south porch, baptistery, and the memorial chapel at the south-west corner of the edifice, take the place of the usual south aisle. A recumbent memorial would be placed in the centre of the chapel. A crypt would be formed beneath this chapel and across the western end of nave and north aisle, from which the church would also be approached by a staircase, for the convenience of those coming from the valley below.

The architect is Mr. HERBERT W. BOOTH, 23 George Street, Halifax, from whose drawing, recently exhibited at the Royal Academy, our illustration is, by permission, reproduced.

NEW SCHOOLS FOR THE WOOLTON WAWEN SCHOOL BOARD.

THESE schools have been recently built at Henley-in-Arden, from plans by Mr. HAWLEY LLOYD, of 79 Colmore Row, Birmingham. The site upon which they stand is an unusually suitable one, having a frontage to the main street, and being bounded on either side by private roads, which allow of separate entrances to the playgrounds as well as the school buildings for both the boys and the girls and infants.

Mr. F. J. BRILEY, of the Coventry Road, Birmingham, was the contractor. The cost of the buildings, together with the walling and draining of the playgrounds, amounted to 2,023*l.* 10*s.* 9*d.*, or 7*l.* 3*s.* per school-place provided.

The walls are internally of Stratford-upon-Avon machine-made bricks, and externally are faced with local hand-made red bricks. The roofs are covered with brown tiles supplied by the Madeley Wood Brick Company, from whom the paving-tiles with which the entrances are laid were also obtained. The floors of all the rooms are laid with blocks of old oak set in pitch upon a concrete bed. The roofs are constructed partly of old oak and partly of fir timbers. All the oak timber re-used in floors and roofs was taken from the buildings formerly covering a portion of the site. There being no grammar school in the vicinity, a separate class-room has been provided for the accommodation of a "grammar class" of the sons of farmers living in the neighbourhood.

THE LONDON TEMPERANCE HOSPITAL, HAMPSTEAD ROAD.

THIS illustration represents the west wing of the London Temperance Hospital in the Hampstead Road, of which Mr. SAMUEL MORLEY, M.P., is president, and Mr. THOMAS CASH is chairman. The memorial-stone was laid by the Duke of WESTMINSTER on April 24, 1884. This wing, which is being built by Messrs. HIGGS & HILL from the designs of Mr. SAMUEL BURBRIDGE, architect, will complete the original plan of the hospital, the east wing having been erected in 1879. The outside walls are built with stock bricks, with red brick dressings, and the present addition to the building will contain accommodation for seventy in-patients, together with nineteen separate rooms for the use of the additional staff, board-room, and nurses' dining-room. A balcony 18 feet wide, running the entire length of the front, has also been provided for the use of convalescents, and special attention has been paid to the ventilation of the building, with the result, it is believed, of making it as perfect as possible. As the ground floor abutting on the busy thoroughfare of the Hampstead Road could not be made available for hospital purposes, it has been devoted to shops, and, as the hospital has no endowment, the rental which it is hoped will be obtained for them, will be a welcome addition to the revenue.

The new wing, which is to cost, exclusive of site and fittings, about 13,000*l.*, will, it is expected, be ready for accommodation early next spring.

HOUSES AT WHALLEY, NEAR BLACKBURN.

THE above houses, illustrated this week, are two of the series of which a drawing of the first appeared in *The Architect* of August 2, 1884. The agent's house is built of rubble stone from Mr. TAYLOR's quarry at Whalley Nab, rough cast with cement and gravel. There is a cavity and brick lining to all outer walls. The dressings are from Waddington Fell quarries. The woodwork—except the porch, which is oak, well oiled—is of pine, painted. The roofs, except porch roof, are slated with blue Welsh slates, with brown-red ridge and hip tiling and finials, from Mr. J. C. EDWARDS, of Ruabon. The porch roof is tiled with plain tiles from Mr. EDWARDS's works. Owing to the plain character of the building, the cost has been very moderate, though nothing necessary for comfort and convenience has been omitted.

The house for Mr. DAVIS is about the same size as the above, but of a different character as regards the exterior walling, which is faced with local parpoints, and the dressings being from the Pendle quarries. The remainder of the work is similar to that in the house above described.

The buildings have been carried out from the designs and under the superintendence of Messrs. STONES & GRADWELL, 10 Richmond Terrace, Blackburn.

SCAFFOLDING, ETC., CREDIT LYONNAIS AND HOTEL DE VILLE, PARIS.

A SALON exhibition would be incomplete if it did not contain a painting in oils of an architectural or constructive subject by M. VICTOR DARGAUD. The artist has made buildings a specialty, but he prefers to represent them in progress. The difficulties which are presented by the timbers of the scaffolding give him opportunities for displaying his skill in perspective and in light and shade. With work of this kind mere sleight of hand will not avail. M. DARGAUD understands construction, and his pictures accordingly give pleasure to contractors no less than to amateurs. His interiors of ironworks and manufactories are equally successful.

## MR. RUSKIN'S LECTURES.

MR. RUSKIN did not deliver the sixth of his series of lectures on "The Pleasures of England" in the Lecture Theatre of the University Museum, Oxford, on Saturday. The subject in the syllabus was "Atheism: The Pleasures of Sense." The Professor said he believed that, although they differed from him in sundry points recently submitted to them, that day they could not but agree with him in this, that the efforts of a paltry British press to reduce lectures prepared only for their hearing to the level of its own understanding, had reduced the reports of his lectures, on which so many of them were unfortunately dependent, into a mass of heterogeneous rabble, out of which it was hopeless to advance a step further. With their permission, therefore, he did not propose for a week or two to deliver the lectures on "Atheism" and "Mechanism," the details of which had so far fluttered the doves of the vivisectionists that they were prepared, if possible, to exercise their newly-acquired rights of the franchise in an encounter with their single-handed antagonist. He hoped to content them that day with some general cleanings up and putting to rights, before going into the series again. In the first place, there was a great mistake in most of the papers about the names of the ships he had mentioned in his last lecture, and the reporters had become confused between the names of the ships and the gentlemen who commanded. The names of the ships he mentioned were the *Captain*, which most of them had forgotten, the *London*, and the *Eurydice*. The latter was a wooden ship—a frigate—and was blown over on her beam ends by one of those fearful blasts which he had described in his essay on Winds; but in all the pictures that he had seen of her she was represented as carrying too much sail—too much sail for a windy day. He had reason also to think that her lower deck doors were open. He did not dwell upon that. His own feeling was that she was carrying too much sail in the pride of her beauty, and, in the modern practice, going as fast and as dangerously as they could to places where they had nothing to do, and where they did not know what to do once they had got there. The *Captain* was an iron ship, known to be top-heavy, and went to sea in spite of warning to that effect. She was caught in the Bay of Biscay, and simply turned bottom upwards, and went down straight, the shrieks of the engineers being heard by two or three of the crew who escaped, as the coals fell upon them red and hot from the furnaces. There was nothing in all the annals of naval disasters so acute and so horrible as that. The *London* simply sank hopelessly and quickly from under her



passengers, because she was waterlogged and the sea dashed over her decks. Why, any fishing-smack would have been perfectly safe in the same position. He would add to those three naval disasters a much more antecedent one—that of the *Royal George*, which was sunk with the greater part of her crew while the captain was writing in his cabin, in the harbour, because a few of her crew were hunting rats half a minute too long in her hull. They had thus four accurate illustrations of a kind of shipbuilding and ship management of which there was no parallel whatever either among the Athenians, the Vikings, the Normans, Carthaginians, or Venetians. These catastrophes belonged exclusively to modern naval history, which had its triumphs, but was darkened by many more shadows than those features which beautified it. The Professor, having made this explanation, stated that he had arranged for the immediate hour a little lecture on "Patience," and then proceeded to read from some of his former works, and concluded by saying that next Saturday he would have the happiness of saying something about glaciers and mountains, and so forth, and would afterwards resume his series of lectures by that on the "Pleasures of Sense."

### PETERBOROUGH CATHEDRAL.

THE works of restoration at Peterborough Cathedral have been suspended in consequence of the Bishop of Peterborough having so emphatically protested against the proposed mode of restoring the cathedral as to threaten to withdraw his promised subscriptions. Dean Perowne has issued a circular in vindication of the Restoration Committee's action. He contends that the raising of the tower, against which the bishop protests, was in the original contract. Mr. Pearson, R.A., the architect, had furnished a design for a very noble tower, and had proposed to restore the discovered fragments of the Norman lantern and a large portion of the Norman arcading. The tower would thus be raised 15 feet, and if it is not done now it will hereafter be impossible, except by adding some incongruous superstructure to the low squat fourteenth century tower. The dean adds that the subscriptions already promised will far more than cover the cost of one stage of the tower, and he urges the speedy removal of the misunderstandings, especially as the works are at present delayed.

### THE RESTORATION OF STRATFORD-ON-AVON CHURCH.

A PUBLIC vestry meeting was held on Monday, in the parish church, Stratford-on-Avon, to receive the committee's report on the proposed works of restoration and the recommendations of the architects (Messrs. Bodley and Garner), who have examined and reported upon the present condition of the building. Mr. C. E. Flower read the report of the Restoration Committee, which stated that shortly after their appointment they invited the Society for the Preservation of Ancient Buildings to inspect and report upon the condition of the church. The society accordingly sent their secretary and another architect, and they afterwards sent in a report on the present state of the church, and gave advice as to the restoration. On almost every point the committee came to the conclusion to follow the advice of the society, and in the only important point on which they differed—the position of the new vestry—after consultation with other architects, they had yielded their views to those of the society. The committee had consulted with Messrs. Bodley and Garner, as professional advisers, during the latter part of their deliberations, and they decided to recommend that those gentlemen be appointed architects of the proposed restoration. A report from Messrs. Bodley and Garner had been already received, and a further report going more into details would be available. The committee recommended, that, subject to such modifications or omissions as might be decided upon, the work proposed to be done by Messrs. Bodley and Garner be proceeded with as soon as the necessary amount—viz., 12,000*l.*—was promised. They recommended that a subscription list be opened, and that as soon as possible a public meeting be called to consider the whole question, and to appoint the necessary committee. Mr. Flower explained that it was proposed to enlarge the Clopton Chapel so as to shew the monuments better, instead of crowding them up with seats. It was also proposed to seat the two transepts, by removing the organ to a place over the tower-arch, and by the erection of a suitable vestry either at the north or south side of the church. The architects also recommended the erection of a second altar and reredos under the tower, the removal of the galleries in the nave, and the reseating of the church on an improved plan. As regards the preservation of the fabric, the architects recommended that the stonework should be carefully examined piece by piece, and that repairs should be done carefully under the personal supervision of some competent person. It was not proposed to have this portion of the work done by contract. The architects' report, a summary of which has already appeared in our columns, was taken as read.—The Vicar moved the adoption of the report.—The Mayor

seconded the resolution, and stated that Sir Philip Cunliffe Owen had kindly consented to act as honorary secretary of the Restoration Fund.—Mr. J. Cox suggested that the work should be kept distinct, as many persons would be ready to contribute towards the preservation of the church as a grand memorial of the past, who might not care to subscribe towards the internal fittings and alterations. The latter was a work which chiefly concerned the congregation and members of the Church of England, and, in any case, he thought the exterior of the church should first receive attention.—Mr. Colbourne (ex-Mayor) said he could not agree to the curtailment of the number of sittings, or to the total abolition of the existing pews, which were very handsome and good in character. He pointed out that out of the 10,000*l.* or 12,000*l.* which it was proposed to expend upon the church, only a trifle over 1,000*l.* was allowed for repairs to the structure. He considered that amount inadequate, and, in his opinion, the outside of the building should first receive attention.—Mr. C. E. Flower said the reason this work was put last in the recommendations, was owing to the inability of the architects to state positively what required to be done, and the probable cost.—The resolution was unanimously carried. Mr. C. E. Flower proposed, "That a requisition be made to the Mayor to call a public meeting, for the purpose of appointing a general committee, and for raising the necessary funds for the restoration and preservation of Stratford-on-Avon parish church."—Mr. Nason seconded the proposition, and it was agreed to, and the meeting shortly afterwards terminated.

### THE STUDY OF ARCHITECTURAL HISTORY.

THE opening lecture of the course promoted by the Dundee Institute of Architecture, Science, and Art was delivered on the 20th inst. by Professor G. Baldwin Brown. The subject was "The Study of Architectural History." Mr. James Maclaren, the President of the Institute, occupied the chair, and amongst those present were Principal Peterson, Rev. Mr. Sugden, Mr. R. Blackadder, Dr. Spence, Mr. R. Keith, and Mr. Charles Ower.

Professor Baldwin Brown said that the few remarks which he should have the honour to offer them that evening had a reference to the work which lay before the Dundee Institute of Architecture, Science, and Art, to which he took that opportunity of wishing a very prosperous and distinguished career, and a useful career, as he was certain it would be. The large scope that the Institute took in its work—embracing, as it did, not only architecture, but all the other arts—was a great feature, and therefore he thought there would be some appropriateness if he offered one or two remarks about the value of keeping up a connection between architecture and the kindred arts of painting and sculpture. In old time the connection between architecture and the other arts of form was much closer than it was at present. The reason of this might partly be found in the spirit in which the arts were now carried on. Architecture, if it were worthy of the name at all, must have about it a certain monumental greatness, while the painter could succeed upon a very small scale of work, and in a purely naturalistic style. The naturalistic spirit which existed in painting, and which every day was becoming more prominent in sculpture, was at the opposite pole to the spirit of great architecture, and the architect and his brother artists, working in different directions, were coming every day to have less and less in common. The result was a severance of the connection between the three great arts of form, a connection which in old time was productive of the happiest results for all the three. Speaking of the advantage of a close connection being kept up between decorative art and architecture, the lecturer said that of recent years many expedients had been tried for the improvement of the decorative work of various kinds which was turned out of our workshops and manufactories. For himself, he believed that nothing would contribute more towards that end than the spread of a sound knowledge of the principles of architecture. The study of the buildings of the past could not fail to awaken a sense of what ornamentation really should be—not a mere external appendage put on anywhere where it would look nice, but something closely related to the structure and to the use of the object to be adorned, something which should be significant as well as beautiful, and should conform to another law than mere caprice. Towards accomplishing this desirable object, industrial museums had done and were doing a much needed and important work, but there was one danger which it would be necessary to guard against if their efficiency as educational institutions were to be maintained at its highest possible pitch—the danger lest the collections should grow too large, and should be selected without due regard to a high standard of excellence. There would be little educational value in museums fitted with a mere heterogeneous collection of objects in all styles and degrees of merit. The collection, therefore, should be select, and there should be a specially prepared catalogue pointing out the merits of each object and what those merits depended on, and showing wherein resided the essential characteristics of different styles. But, whatever could be done by these means, a more solid advantage could, he was convinced, be gained by beginning further back, and by awakening the intel-



ligence of the workman to think the thing out for himself rather than copy the results of others. Such an Institute as that which he had the honour of addressing might do a great work by bringing together men engaged in the different processes of the arts, and by setting before them always a high artistic standard, arrived at by a study of the great works of architecture, sculpture, and painting in the past.

Turning to another aspect of the subject, the lecturer said that if the architect—the true master workman—could supply from his commanding position the principles on which work in the decorative arts should be carried on, he could, on the other hand, receive himself advantage of the highest kind from his connection with the painter and sculptor, from whom, in the present day, he was in some danger of becoming dissociated. This advantage may be summed up in a word. It secured to the architect that he should feel in all he did that he was equally with the painter and the sculptor an artist, and that what he produced was not a convenient heap of bricks or stones, but a work of art. Architecture, as an art, was not a maimed and cramped production. The monuments it had reared in the great epochs of old stood forth clear and perfect expressions of the thought of their Creator. The greatest that sculpture and painting had accomplished was not more purely artistic, more free from any appearance of bondage to mere utility than the achievements of architecture.

The characteristics of architecture, as a true art, as illustrated in the history of the past, was, he afterwards said, the theme to which he would ask them for a few moments to turn. These three points were—First, architecture as an art of expression; second, architecture as the expression of national life; and third, architecture as the expression of great ideas. Under the first head he said it was in the religious festival that man first felt that freedom, that spontaneous impulse towards expression, from which architecture and the arts were born. The treatment by the ancients of their grand buildings rather as monuments to impress the beholder than as habitations or structures for utility conveyed a useful lesson that might be taken to heart, both by those who ordered and those who designed our public buildings. This character of early buildings was commonly emphasised by placing them upon a terraced substructure, the want of which in connection with the Houses of Parliament, and the new Natural History Museum at South Kensington, was shown to be an architectural blunder. Under the second head, he said that in the erection of the Tower of Babel, in the dim twilight before history began, they seemed to see standing out already the great fact to which all artistic history was witness, that a national idea or a common sentiment of a religious or patriotic kind found its most natural outcome in architecture. Again and again had the heart of a people been stirred by some great national undertaking, and they had thrown themselves and all they had into the work. The popular heart still beat as it did when they preached the Crusades and planned the great cathedrals, and when it was reached it was just as responsive. In our own time and country, however, art had no sort of hold upon the popular mind. This was no doubt a legacy to us from Puritanism. The elements which Puritanism had contributed to the national character were amongst the most precious which it enshrined, and he would not echo the cry which was sometimes thoughtlessly raised on behalf of art against Puritanism. Had they to choose between Puritanism and art, they should all rightly hold to the former, but happily no such choice was necessary. It was true that art had in the past not seldom ministered to luxury and pride, but it had also ministered more often and more nobly to religion and the nourishment of great ideas. If they once grasped the truth that art was not a mere plaything or outward adornment, but the expression of the thoughts of great men and of the lives of peoples, then the supposed incompatibility of Puritanism and art would not trouble them. The public history of the past taught us that architecture had in all the great ages of its development drawn its inspiration from the common feelings and aspirations of men—had expressed in every age the special ideas and tendencies of that age; and as each individual had his part in making his age, so he had a part in the production of that art which was, or ought to be, the most perfect expression of an age. To awaken that living personal interest in the members of the public generally in what was going on in architecture and art was one of the highest functions of an Institute like this, and the leaders of the profession had a great obligation upon them to keep up in everything a high ideal, and to preserve their artistic honour unstained. His third point concerned architecture looked at in its highest aspects as the expression of great ideas—as the art which more than any other impressed us with a sense of the sublime through its grandeur, its repose, or its aspiring quality.

The essence of the matter seemed to be that architecture, as it appeared before them in the great monuments of the past, reproduced for us in its own artistic forms the grandeur and beauty of the material creation, affecting us in the same manner as the aspect of nature affected us. Architecture therefore assumed as an art a place of the highest dignity, and the impressions it conveyed blended themselves readily with the emotions of religion. For, as the Hebrew poets reiterated in their magnificent language, these efforts of sublimity, what were they but revelations of the divine spirit which moved through all things? And what was archi-

ture in these aspects of it but a second and in its way equally valid expression of the same divine spirit? The artistic work, therefore, which it fell to an architect to carry out when he strove to make his buildings grand, expressive, and beautiful was a most important element in the higher culture of the human race. Grandeur, secured by greatness of style rather than by mere bulk; simplicity, which gave ever a look of greatness; purity of line on which depended repose; suitability, adaptation to human needs, which did not degrade the art, but rather elevated it through imparting to it throughout a rational character; beauty, gained by disciplining into symmetry and into pattern the flowing curves, the rich complexity of natural detail—these were qualities in work at which the architect as an artist was bound to aim, and in aiming at these qualities he was ministering to the spiritual culture of humanity, and making his work a part of the revelation of God to men.

At the close of the lecture a cordial vote of thanks was proposed to Professor Baldwin Brown, on the motion of the chairman.

## THE EXCAVATIONS IN THE ROMAN FORUM.

IT has been considered necessary to propose the removal of the Church of Santa Maria Liberatrice, which stands between the Palace of Caligula and the Forum in Rome, in order that the building may not be undermined by the excavations. The nuns who own the property have asked a large sum for the church. In the meantime, the works are to be continued by the demolition of the modern granaries, built among and against and almost entirely hiding those magnificent lofty walls behind the Church of Santa Maria Liberatrice, belonging to a grand edifice at the base of the Palatine, regarding which nothing whatever is known, though many different names have been given to it. The clearance at this point will solve a most interesting problem, and doubtless have very important results. As the opening of the new Via Cavour continues towards the Forum, the modern houses between the Curia and the Temple of Antoninus and Faustina, which still cover the remains of the Basilica Emilia and other edifices on that side of the Forum, will be removed, and the excavations there carried to completion. Some little time, however, must elapse before this can be done, and altogether the actual condition of Italian finances, and the greatly increased burdens which the cholera and other disasters have brought upon the country, leave little hope of much progress being made in antiquarian research this winter.

## MASON COLLEGE, BIRMINGHAM.

THE Council of the Mason College are inviting donations to a permanent fund, to be called "The Additional Endowment Fund." The establishment of such a fund is rendered necessary in consequence of the income arising from the landed property and the sums of money with which the late Sir Josiah Mason endowed the college having proved to be insufficient to provide for the annual expenditure, owing to the rapid development of the institution.

The following extract from a circular issued by the trustees will explain in detail the objects of the proposed fund, and will give information as to the position of the college:—

"The late Sir Josiah Mason built a noble college for the advancement of the higher education in this town and district. The structure is admitted to occupy a very high place among buildings devised for this purpose. In addition to the building, which cost upwards of 60,000*l.*, Sir Josiah Mason gave during his lifetime, and bequeathed after his death, landed property and sums of money which produce an income of 4250*l.* per annum. The expenses of general management—*i.e.*, the salaries and wages of the persons concerned in the management of the college (other than the professors), rates, taxes, and insurance, &c.—amount to upwards of 2,570*l.* per annum, and the balance does not suffice for the stipends of the professors. It will be therefore seen that the Council have not sufficient resources at their disposal to enable them to cope adequately with the requirements of instruction, as now understood, either on the science or the arts side of the college.

"1. Scholarships and exhibitions are urgently needed, in order to do justice both to the students and to the academic board. A college unable to grant these valuable marks of distinction labours under serious disabilities as compared with institutions more favourably circumstanced. At present the Council are able to grant only a few book prizes.

"2. Many departments of the college can only be worked efficiently when supplied with a large quantity of costly apparatus. Apart from original outlay, there is a constant depreciation of such apparatus, partly from use, partly from the need of supplying newer and better articles. The Council have hitherto been unable to equip the various laboratories and workshops with many things considered by the professors to be necessary for the due carrying out of their work. In some of these departments suitable illustra-



tions of the lectures can be obtained only from well furnished museums. The college is at present very defective in this point of view.

"3. The Council are anxious to make more liberal arrangements in respect of the staff of teachers, and to make as soon as possible some additions to their number. The Council have regretted the inferior development of the Arts side of the college, and especially the want of Professors of Logic, Philosophy, Political Economy, and Modern History. Experience has proved that the success of a college is much dependent on the provision of a complete curriculum of the arts and sciences.

"4. The desirableness of additional tutorial aid, as regards especially the early examinations, is now engaging the consideration of the authorities. This would involve an annual addition to existing expenditure."

### WESTMINSTER ABBEY.

IN the House of Commons, on the 21st inst., Mr. Cavendish Bentinck asked the Chancellor of the Exchequer whether Her Majesty's Government had undertaken to make any money grant to the Dean and Chapter of Westminster for the general repairs of the abbey church, and the renovation of the north transept, and whether any plans and estimates relating thereto had been submitted to the Office of Works. He had heard that it was proposed that a sum of money should be advanced by the Ecclesiastical Commissioners. He hoped no money would be given to the Dean and Chapter without adequate guarantees as to how it would be spent. He was a strong supporter of the Church, but he had no confidence in the artistic taste of the clergy.

Mr. Illingworth wished to know whether Westminster Abbey was to be regarded as a public building belonging to a national institution, which was to be the object of the concern of the House of Commons. He wanted to know whether there were not sufficient funds in the hands of the Dean and Chapter that were available for the repair of the fabric of the cathedral. On the occasion of the laying of the foundation-stone of the new towers of Peterborough Cathedral, the Bishop of Peterborough had expressed thankfulness that no public money was to be expended on the restoration of that cathedral, and that, therefore, the matter had been kept entirely out of the hands of the Government and of Parliament. Was it asserted that Westminster Abbey stood upon an entirely different footing from any other cathedral, because if it were to be regarded as a public building belonging to a national institution, some forty or fifty other buildings of a similar character and equally deserving of public consideration would have to be dealt with also. He held that the granting of public money for the restoration of cathedrals was altogether out of the question, and he should also object to the funds in the hands of the Ecclesiastical Commissioners being applied for that purpose as long as there were sufficient funds in the hands of the Deans and Chapters to defray the expenses of the restoration of these buildings. Doubtless the Deans and Chapters throughout the country were most worthy men, but they were the most unsafe custodians of public money, large sums having been jobbed away under the pretence of restorations under their management. In his opinion the control of their funds and of the buildings of the cathedrals should be removed from their hands. Would it ever enter the mind of any sane man if the matter were now under consideration for the first time to place the control of these funds in the hands of bodies like the Deans and Chapters? Such control should, in his opinion, be placed in the hands of some authority who would be responsible to that house.

The Chancellor of the Exchequer said that when the estates were re-settled a few years ago the Dean and Chapter of Westminster, instead of receiving a fixed sum, had certain estates of fluctuating value assigned to them to control; and, as salaries and other expenses had to be met, the sum available for the repair of the fabric and to be spent upon the houses occupied by the officials had sometimes fallen to an extremely small one. Last session it was the intention of the Government to introduce a Bill, the leading principle of which was that, instead of the estates being given to the Dean and Chapter to manage, they should receive an annual fixed sum out of the money in the hands of the Ecclesiastical Commissioners, and that this money should be earmarked for special purposes—so much for salaries, so much for services, and so much for fabrics; and that when large works of restoration were to be carried out the Dean and Chapter should have power to mortgage the fabric fund, repaying it in a series of years. That was the proposal which the Government would have brought in at the end of last session, and he undertook now that it should be introduced in the sittings after Christmas, so that it might be passed in the course of the year. The Government could not assume the additional responsibility of providing for the repair of ecclesiastical buildings throughout the country, but he thought the peculiar character of Westminster Abbey placed it in an exceptional position. It was not the intention of the Government to put any fresh charge upon the public.

Mr. Rylands said he agreed with the Chancellor of the Exchequer that the whole of the necessary repairs on the fabric of

cathedrals ought to be provided out of the funds at the disposal of the Ecclesiastical Commissioners and not by means of grants of public money. As he understood that a Bill was to be introduced next session in regard to this matter, he submitted to the Government that in the new arrangements which would be effected by the proposed enactment there should be provided a representative of the Government who in some way or other should have a voice in the management and in the expenditure of those funds.

### MANCHESTER ARCHITECTURAL ASSOCIATION.

THE second ordinary meeting of the Manchester Architectural Association was held at the Old Town Hall, November 25, Mr. Davies Colley in the chair. Mr. J. T. Hodgson read a paper on "Sewage Farms," in which he said:—I have selected this subject with a view of bringing before your notice the means provided for the disposal of sewage and trade refuse, and although it may be outside the general range of subjects for the consideration of architects, it nevertheless constitutes one of the most important problems of the day in connection with sanitary science, with which all architects are expected to be acquainted. It has often appeared to me strangely inconsistent that, whilst so much attention is bestowed on house sanitation, so little thought is given to the ultimate disposal of the filth we are so anxious to get away from the vicinity of our houses, expecting to insure good health in our towns and suburbs by turning the rivers and watercourses into open sewers. It would almost appear that people dwelling sufficiently far from the influence of polluted streams are indifferent as to their condition, although they may be adding to their nuisance. But what is the true benefit of sanitary science if only used for the selfish object of insuring our own comfort and good health at the risk of poisoning others? Sewage farms at one time were looked upon more as the inventions of speculators for the utilisation of the manure than for the speedy removal of the filth from the neighbourhood of habitations, but are now admitted to be the only true means of disposing of liquid sewage from inland towns. These farms may be divided into two classes, the chemical and mechanical: the former, for which there are many patents, is by applying chemicals to the sewage when in tanks, which have the effect of separating the solid and suspended matter from the liquid, which generally requires filtering before passing into the watercourses. The solid matter is sold as a valuable manure. The mechanical is by allowing the sewage to filter through the land. This last system may again be divided into wide surface irrigation and intermittent downward filtration, the former by allowing the sewage to flow over the land, leaving behind the manurial elements to be absorbed by vegetation. In the latter the sewage is applied by running along furrows to be taken up through the roots instead of from the surface, as in the case of the former. These farms are often spoken of in no very flattering terms, but, properly constructed and managed, are very satisfactory. There is great prejudice against sewage farms from the notion they are injurious to health, which is contradicted by the report of the Rivers Pollution Commission, Dr. Littlejohn, Medical Officer of Health to the City of Edinburgh; Professor Christison, President of the Royal Society of Edinburgh; Dr. A. Carpenter, and many others.

A discussion followed, in which Messrs. Davies Colley, Oldham, Brooke, Chadwick, Talbot, Worthington, and Preston took part.

### CELTIC ART.

AT a meeting of the Gaelic Society of London, Adam Street, on the 12th inst., Mr. Thos. Arnold, architect, read a paper on "Celtic Art." After briefly sketching the history of the old Scots in Ireland and Scotland, the author showed that a critical examination of Celtic art pointed to its Eastern origin. The unique character of Celtic art, as exhibited in architectural remains, in splendid manuscripts such as the Book of Kells, &c., in monumental sculptured stones, and in metal work of crosiers, reliquaries, &c., was described in detail with the help of illustrations. Celtic art grew up in the monasteries of Ireland, and was carried by the Celtic preachers wherever they went, as is shown by the abundance of manuscripts exhibiting the purest Celtic ornaments to be found in many of the monasteries of the Scots on the Continent. The Celtic school of design never had, however, a full development. It was questionable whether we could now so catch its spirit as to be able to develop anything out of the very imperfect remains of its architecture; but the school of ornamentation was adapted for the multiform uses in metal work, pottery, glass, &c. The art would remain as the monument of an ancient race long after every scrap of the literature of that period had passed into oblivion. It was one of the most valuable heirlooms bequeathed to our time, and the undeniable proof of the great ability of a race of which the more we know the more are we amazed at the intellectual light they diffused in an age of darkness. There was a discussion, in which Dr. McDonald (chairman), Dr. Cameron Gillies, Major Colin Mackenzie, Mr. Forbes Robertson, Mr. G. Barclay, and others took part.



## THE CITY COMPANIES.

## 3. The Painters' Company.

THE Company of Painter-Stainers is of considerable antiquity. According to Horace Walpole, their first charter, in which they are styled Peyntours, was granted in the sixth of King Edward IV., but they existed as a fraternity in the time of King Edward III.

They were called paynter-stayners because a picture on canvas was formerly called a stained cloth, as one on panel was called a table, probably from the French "tableau." In the inventory of the pictures of King Henry VIII. we find them always so distinguished, as—

"Item, a table with the picture of the Lady Elizabeth, her Grace."

"Item, a stained cloth, with the picture of Charles the Emperor."

The company must have attained some importance in the sixteenth century, for Strype tells us that they were charged with the setting forth of twelve soldiers and all their furniture, though they had neither lands nor revenues, nor any riches to discharge the same; but the amount was levied among the brethren, every man according to his ability. The same author informs us that about 1575 "the Peyntours Company found that their trade began to decay, by reason of other persons that had not been apprentices to it, who undertook painting. Whereby much slight work went off; as pictures of the Queen, and noblemen and others; which showed fair to sight; and the people bought the same being much deceived; for that such pictures and works were not substantially wrought; a slander to the whole Company of Painters, and a great decay of workmanship in the said science; and also a great discouragement to divers forward young men very desirous to travel for knowledge in the same."

In the year 1575 the painters addressed Queen Elizabeth that she would consider their cause, and give aid and assistance to them. Their petition was favourably entertained, for in the year 1581 Queen Elizabeth granted the charter of incorporation which they now possess. It is in Latin, finely inscribed on a good-sized sheet of parchment. On the heading is a well-drawn coloured portrait of the Queen seated, and the royal seal is attached. It is addressed, "Liberi Homines et Cives Civitatis London Artis sive Misterii pictorii vocati Anglice Paynters-Steyners," and is dated "Teste meipso apud Westmonasteriensis decimo novo die Julii regni nostri vicessimo tertio," being the 19th of July, the twenty-third of her reign (1581).

Supplementary to this royal charter is a deed on three large sheets of parchment, also dated in 1581, endorsed, "The book of ordynances for the Paynter-Steyners of London was confirmed and sealed by the Lord Chancellor, the Lord Treasurer, and two Lords Chief Justices," and is accordingly signed by "Syr Thomas Bromley, Syr William Cecil, Lord Burleigh, Syr Christofer Wraye, and Syr James Dyer." To each of the signatures is attached the full coat-of-arms, blazoned in colour.

The charter constitutes and grants the Paynter-Steyners to be a body corporate and politick in art, deed, and name, by the names of Master, Wardens, and Commonality of the Freemen of the Art and Mystery of Paynters, commonly called Paynter-Steyners, within the City of London and the suburbs and liberties thereof; authorises them to have a common seal, gives the usual powers, and specially prohibits "that any person, of whatever estate or degree, shall use or exercise the arte or mystery of the Paynter-Steyners, but only such persons as have been heretofore brought up and instructed by some one of the same arte or mystery as apprentice in the same arte for the term of seven years, under penaltie to forfeit the sum of five pounds."

The charter of Elizabeth enjoins that no native or foreigner shall lay or work anything to be sold with varnish upon any wood, stone, paper, parchment, or vellum that is grounded with any mixture pertaining to the art, or with any kind of colour, oil, size, gum, gleere, glue, except persons who are known to be skilful in the art and mystery and shall be approved and allowed by the master, wardens, and assistants of the company, under a penalty of 40s. Another clause states that no person shall apply any kind of colour upon wood, iron, stone, unless it shall stand and abide the force and extremity of the weather.

That stencilling was sometimes substituted for handwork is suggested by the following:—It is ordained and constituted that no person or persons whatsoever shall devise, make, work, use, exercise, and set to sale any manner of false, deceitful, undue, or unlawful works which shall be wrought with stencil pattern or otherwise as painted and printed sleight upon cloth, silk, leather, or any other thing or things with work of sundry colours or with gold foil or silver foil that is deceitful, corrupt, and unlawful, or which shall differ from the true, good, ancient, and perfect use and manner of workmanship, painting, stayning, or laying of colour.

King James II. also granted a charter to this Company, dated the twelfth day in the first year of his reign, which confirms all the powers of the charter of Queen Elizabeth. It alludes to an "Act of Parliament made at Westminster in the first year of the reign of our Royal Grandfather, King James I.," and recites that "The

Art and Mystery of Paynters is an ancient Art or Mystery, and had time out of mind been an ancient Company and Fellowship in the City of London."

The minute-books, which the Company still possess, commence from the year 1623. They prove how completely the Company was empowered to control and regulate the art of this country. One of their duties, frequently exercised, was to search for work, to judge if it were well or ill done, and on many occasions to condemn it. On March 10, 1673, there is a minute, "That the Painter of Joseph and Pottifer's wife and the Fowre Elements be fined 3*l.* 6*s.* 8*d.* for such bad work."

The Company were also applied to as arbitrators or judges of the value of artists' work, of which there is a remarkable instance, as shown in the minute dated January 11, 1631-2. They had received from the Lord Chamberlain the following letter, dated December 13, 1631:—

"I desire the Masters of the Kings and Queene's barges to cawle unto them the Master and Wardens of the Company of Panter-Steyners in London, and such other discreet men as they shall think fitt of the said Company, to make request of them to view the Kings and Queene's new barges, and to make a trewe valuation and estimate of the woork done by Iohn De Cretz in panting trymmyng and gilding the said barges and certify your knowledge under your hands.

(Signed) PEMBROKE MONTGOMERY.

"Iohn de Cretz, sergeant paynter to the King, demand for two barges, the one for the King, newly done, the other for the Quene repared, the Kings 270*l.*, the other 40*l.*"

The following is the answer of the Company sent to the Lord Chamberlain:—

"The Master and Wardens of the Company of Panter-Steyners of London have received a warrant from your lordship, dated December 13, Ano 1631, to vyew the King and Queene's barges, and to estimate the woork done by Iohn De Cretz sergeant panter to His Majie in panting trymmyng and gilding the sade barges, and to certifie our knowledg therein. We have according to your honour's direction made thereof from able and discreet men of our Company did together view the sade barges, and fynde and testify vnto your honour as followeth, vid<sup>t</sup> that the new pantyng and gilding and trymmyng of His Majie's barge is worth 250*l.* The reparing, gilding, and trymmyng of Her Majie's barge is worth 32*l.*"

There is another minute in the following year showing a similar case, dated January 18, 1632-3:—"At the request of Right Honorable the Lord Goryng the Master and Wardens with certain others of the Company were intreated to vewe a peece of work don by Mr. Buckit at the Lord Goryng's howse beyond St. James's howse, and to give a reasonable estimate of the work, which was performed according to his honour's request."

From an early period down to the middle of the last century, when the Royal Academy of Arts was founded, the Painters' Company included the principal artists of England. In the reign of King Henry VIII., Sir John Browne, John Hethe, and Andrew Wright, sargeant paynters to that king, were liverymen of this Company, as will be shown when we allude to the old hall. In the charter granted by Queen Elizabeth, William Herne, Her Majesty's sargeant paynter, is mentioned as upper warden of the Company. Sampson Camden, who is said to have painted a portrait of Queen Elizabeth, was a liveryman of this Company, and his son, William Camden the historian, and Clarencieux king-of-arms, gave a silver cup in memory of his father.

In the minutes of October 26, 1647, it is recorded that "George Wyld, Doctor of Divinitie, Colonell Richard Lovelace, Thomas Rawlins, Esqre., Graver of his Majie's Mint, and Mr. Peter Lilly, were all made free at this Court." On May 17, 1635, "Mr. Inigo Jones, the King's surveyor, was invited to dinner, and very lovingly came and dined with the company."

In the year 1687 the invitations to the Feast of St. Luke were signed by Anthony Verrio and Sir Godfrey Kneller, with N. Shepherd and Ed. Polehampton. The various pictures in the possession of the Company, many of them of considerable merit, are by artists liverymen of the Company, and mostly presented by them. Sir James Thornhill was on the livery, and Charles Catton, one of the founders of the Royal Academy of Arts, was master in 1761. According to the minute books much business was transacted at the meetings of the Court of Assistants, which were numerously attended. A very kindly feeling appears to have prevailed among the brotherhood: bequests of small sums are recited that the brethren may have supper in memory of a deceased liveryman. The Company are frequently in money difficulties, and members of the Court come forward with loans.

The present Painters' Hall stands on the site of the old Painters' Hall, once the residence of Sir John Browne, sergeant paynter to King Henry VIII., by patent dated 1511, and elected an alderman of London in 1522. He made his will on September 17, 1532, and on the 24th of the same month he conveyed to his brother paynter-steyners his house in Little Trinity Lane, which has from that time continued to be the hall of this Company. The various deeds connected with this property date from the 2nd of King Henry VI., when John de Padyngton gives to



Thomas Wayte the reversion of certain tenements with shops, and the appurtenances in Hoggen Lane and Trinity Lane.

There is no record showing what the old Painters' Hall was like; but in a minute book of the date April 2, 1630, "It is fully ordered and agreed that the wanskotting and beautifying of the hall shall presently be set in hand. . . . For the furtherance of which works there was this day presented to this court a forme and patterns drawn by the care and paynes of Mr. Poule Isaacson, which this court with general good liking approved of." On August 5 following, six or more of the most able and best workmen to be had are ordered to be engaged, and inventions, copies, patterns, and draughts to be provided for them to work from. On August 26 it is ordered that the arms of the livery shall be placed in the hall window, after the fashion of those in the upper parlour, and a remembrance to be made in some eminent place in the hall that this hall was beautified A.D. 1630.

This old Painters' Hall was of some importance. John Evelyn in his "Diary" states that the commission for supporting the sick and wounded in the war had permission to meet there. Under date of November 16, 1664, he mentions, "Painters' Hall was lent us to meete in. In the greate room were divers pictures, some reasonably good, that had been given to the Company by several of the wardens and masters of the Company." They continued to meet there till July 3, 1666, on which day he writes, "Thence to Painters' Hall to our other Commission and dined at the Lord Mayor's." In two months afterwards the old hall was consumed in the great fire of London.

The present Painters' Hall was erected on the site of the old one. It is recorded that the company used Cooks' Hall till their own was rebuilt. On December 20, 1668, there is a minute as follows:—"At a committee for rebuilding the hall, Mr. Bird, master, Mr. Savile, Mr. John Bird, and Mr. Evans. Mr. Luck the bricklayer appeared and agreed to do all the bricklayer's work belonging to the hall for fifty-four shillings the rod, he to find lime and sand and to use all the old bricks on the ground. Mr. Bell the carpenter appeared and contracted to build the hall and front house burnt lately, for 50*l.* a square upon the flatt, he agreed to employ Mr. Luck the bricklayer and to pay him thirty and eight shillings a rod for workmanship. This was agreed to, and the Company to pay him his money as he does his work. Ordered, That the committee meet every Tuesday at 9 in the morning without warning. Ordered, That those persons who are members of the committee and do not appear on Tuesdays shall forfeit 6*s.* for every default."

On August 24, 1669, it was resolved that the plate of the company should be mortgaged in order to raise money for the rebuilding, and several members of the Court lent sums of 50*l.* By the end of the year 1669 the new hall must have been built, as in the February following it was agreed to let the German Protestants have the use of the hall every Lord's day twice, and on every holiday, for two years, at 24*l.* per annum. The "New View of London," 1708, states as follows:—"Painter-Stainer's Hall is situated in Little Trinity Lane. It is adorned with a handsome screen, arches, pillars, and pilasters of the Corinthian order, painted in imitation of porphyry with gilded capitals. The pannels of the wainscot and the ceiling are embellished with great variety of history and other painture, exquisitely performed; as 1st, the portraitures of King Charles II., and his Queen Catherine, by Howsman; 2nd, the fire of London; 3rd, Endymion and Luna, by Palmaitier; 4th, Orpheus fleaing Pan, by Brull; 5th, a piece of architecture, by Trevit; 6th, another, given by Mr. Thompson, the city painter; 7th, Heraclitus and Democritus, by Penn; 8th, a landscape, by Aggas; 9th, fish and fowl, by Robinson; 10th, art and envy, by Hungis; 11th, a piece of birds, by Barlow; 12th, a piece of fruit and flowers, by Everbrook; 13th, a ruin, by Griffier; 14th, Cambden's portraiture; 15th, a piece of birds; 16th, the ceiling is finely painted with Pallas triumphant, with the arts and fame (attended by Mercury) suppressing their enemies, sloth, envy, pride, &c., done by Fuller; and there are several other pieces in the parlour." The ceiling decorations above described unfortunately no longer exist, nor is it known when they were destroyed. The pictures, the gifts of artists, former liverymen of the company, still hang upon the walls, and serve to illustrate how intimately the guild was associated with artists in the olden time.

The freedom of the company is obtained on election—(1) by patrimony granted to the sons of freemen born after the admission of their fathers into the freedom of the City; (2) by servitude granted to apprentices who have duly served their time; (3) by redemption on paying an increased fine to the company; and (4) by gift as by redemption, the parties not being otherwise entitled, the company paying the fees and stamps. The livery of the company is obtained on election by any person having the freedom.

The leading members of decorative painting do belong to the company, and fifty-five members are in the painting trade. No power can be found to disfranchise a freeman. Females are entitled to the freedom of the company, but no female has now the freedom. Every person is qualified to be elected to the freedom or livery of the company upon being proposed, seconded, and elected by the Court.

There is no fee, reward, perquisite, profit, or emolument, directly or indirectly, attached to membership, except that two decayed

liverymen and ten poor lame painters are eligible for Mr. Stock's charity of 10*l.* annually, and except the poor-box supported by voluntary contributions, and Mr. Fairchild's legacy, distributed to the widows and orphans of past members in sums varying from 30*s.* to 4*l.*, poverty and respectability being the only further qualifications.

The members of the livery are entitled to vote for Lord Mayor, sheriffs, chamberlain, bridgemasters, and other City offices, at the common halls at Guildhall, and at all elections of master and wardens of the company at the common hall on October 18. The average standing of a liveryman when he is elected on the Court is about ten years, and, unless he resigns, he remains after election a member of the Court for the rest of his life, subject to certain restrictions.

## LIGHTHOUSE ILLUMINATION.

WHEN the experiments on lighthouse illumination were undertaken a few years ago, we wrote in strong terms condemning the difficulties which were raised by officials in dealing with the inventions of Mr. John R. Wigham, of Dublin. His system of oil-gas was found to be most applicable for lighthouses, but it could not overcome the obstacles created by the circumlocution offices. The following letter from Professor Tyndall, who found himself unable to secure fair play for Mr. Wigham, and therefore resigned his appointment, will bear out the strictures which were passed in this journal on the case, and which at the time may have seemed to be over-severe:—

It goes against me to charge Mr. Chamberlain with theft, even in "a metaphorical sense;" but most assuredly he has stolen my thunder. He poses as a "protector," knowing right well that the head and front of my offending was my effort to protect from official extinction an able and meritorious man, who had the misfortune to raise a rival at the Trinity House, and to ruffle the dignity of the gentlemen of the Board of Trade. Struggling single-handed, relying solely on his own industry and talents, and with no public funds to fall back upon at pleasure, Mr. John Wigham, to whom I here refer, during the brief period of his permitted activity, had made advances in the art of lighthouse illumination which placed him far ahead of all competitors. This man I did my best to protect from the effects of professional jealousy and bureaucratic irritation. My reluctance to draw too heavily upon your good nature alone prevents me from offering a condensed history of Mr. Wigham's labours, and of my relation to them, for publication in the *Times*.

It was my earnest desire to utilise Mr. Wigham's genius for the public good. It was the object of officials whom he had offended to extinguish him. They did what they could to weary him and worry him and take the heart of enterprise out of him, and they certainly succeeded in checking the development of his system of lighthouse illumination. Had it not been for an opposition which, considering the interests at stake, seemed to me at times criminal, that system would assuredly be far more advanced than it now is. His rival was encouraged to push forward, while he was held back. The boldest attempt made against Mr. Wigham was the appropriation of his invention of superposed lenses for the new Eddystone lighthouse. This high-handed proceeding would have provoked litigation, had not the Elder Brethren, reverting to their more generous instincts, lately taken a more reasonable course than that which their engineer first advised them to pursue. A compensation of 2,500*l.* was offered to Mr. Wigham, and eventually accepted by him. This outlay, I may remark, would have been rendered entirely unnecessary by a wiser mode of action. The reasonableness of the Trinity House was not, however, shared by the Board of Trade. Mr. Chamberlain, as a man of business, ought to have known the advantages of healthy rivalry. He ought to have known that the activity in regard to oil lights, displayed of late years at the Trinity House, is to be traced to the stimulus furnished by the gas system. Were he a man of juster temper he would have found room for both. Instead of this he tried hard, not only to wipe out Mr. Wigham's claims for the past, but, by depriving him of all incentive to further effort, to abolish him for the future. With regard to the President of the Board of Trade and his officials, the Irish inventor writes to me thus:—"They grasped not only the Eddystone invention, which was all that the Trinity House asked for when they offered the 2,500*l.*, but all my patents and inventions connected with lighthouses, whether tried or untried. It was with great difficulty that I got them to consent to allow me to hold the proprietorship of my own thoughts for the future; but very shame, I suppose, caused them at last to relinquish that claim." If this be true, it is less the alleged injustice to Mr. Wigham than the attempted suspension of energies so competent to work for the well-being of the sailor that deserves reprehension.

Between truth and untruth there lies a penumbral zone which belongs equally to both; and I have often admired the adroitness with which Mr. Chamberlain sails within the "half-shadow." He sometimes, I fear, crosses the boundary on the wrong side. He describes me as being "at issue with the most experienced practical authorities." Never was there a consensus of practical



authorities more overwhelming than that which I have vainly laid before Mr. Chamberlain. His "practical authorities" are officials, some of them pecuniarily interested in this question. My practical authorities are men dependent on the beacons of our coast for the security of their own lives and the lives of those committed to their care. Permit me to lay before you a few samples of the testimony voluntarily offered by the commanders of the great Atlantic steamers with regard to the lighthouse, arranged and lighted on Wigham's principles, on the dangerous cliffs of Galley Head. One captain calls it "the most marked and unmistakable light" he ever saw; another calls it "a splendid light, easily distinguished by its marked character"; another calls it "a most strongly marked and appropriate light"; another describes it as "a most excellent light, which can be easily distinguished from every other light on the coast." Such was the evidence unanimously given in favour of the light when it was first introduced. Five years after its introduction, Messrs. Ismay, Imrie & Co., on being asked whether they still retained their favourable opinion of the light, reaffirmed that opinion by pronouncing it "the very best light upon the coast." It is the inventor of this light whom our officials, only too successfully, have sought to paralyse.

Before the first Illuminants Committee appointed by Mr. Chamberlain had been swamped by his later despotism, some fear was expressed at one of our meetings that the expense of the experiments proposed to be made at the South Foreland would be considerable. The chairman of the Committee, however, informed me that the Assistant-Secretary of the Board of Trade, on being told that the inquiry would cost 4,000*l.*, had replied that money was no object, and that the sum mentioned would be forthcoming when required. I could not help contrasting this lavish liberality with the small economies practised in Ireland. But will 4,000*l.* cover the experiments at the South Foreland? If not, how much more will be needed to cover them? To be worth anything they must be continued through the winter. What will be the bill afterwards? The Illuminants Committee broke down. What check in place of it has been brought to bear upon the expenditure of the Trinity House engineer, who has had the public purse open to him during all these months? To me Mr. Chamberlain's talk about expending public money savours of humbug.

With regard to Mr. Chamberlain's charge against me, of having indulged in "unworthy and ungenerous insinuations," those who know both him and me will laugh at such a charge. I do not deal in insinuations. When I repudiate and oppose the mean and grinding despotism which he would introduce into official life, I speak to him, and of him, not by insinuation, but with honest plainness of utterance.

### WESTMINSTER HALL.

THE following letter from the Rev. W. J. Loftie, the author of a history of London, has appeared in the *Times*:—Westminster Hall is, in part at least, as old as the reign of Edward the Confessor. In his reign it must have stood close to the edge of the Thames, and if any side was exposed to view it was the eastern, and not, as at present, the western. Then, and for centuries afterwards, the western side was in a court, in which court, during and after the reign of Henry III., if not long before, the kitchen was situated. The buildings on this side at first connected the Hall with the Abbey, and though we cannot tell when they were disconnected by the thoroughfare called afterwards St. Margaret's Lane, we know that it was long subsequent to the founding of the palace. This is evidenced, if evidence is wanting, by such a local name as New Palace Yard. As to the exact shape, size, and number of the buildings which intervened between the Hall and the Abbey it depends on the period to which we refer. As the land on the east side was reclaimed it became gradually more possible to build; and I believe that while the palace of Edward the Confessor was mainly westward of the Hall, that of, say, Richard II., was mainly on the eastern side towards the river. But the old courtyards between the Hall and the Abbey continued to exist, in spite of numerous alterations. Mr. Pearson gives a detailed account of the buildings erected here under Queen Elizabeth. The point, however, which I want to insist upon is so important that I deny myself the temptation of dwelling on this most interesting passage of the report of July 15. I want to make it perfectly clear that, except during the time the now removed law courts were in process of construction, the western side of the Hall was never exposed to view from the street, and whatever buildings stood against it were in courts of great irregularity, almost as if they had been purposely designed to mask the ugliness of the long roof.

The object of bringing out this point as clearly as possible is that, once admitted, it deprives Mr. Pearson's design of any right to be called a "restoration." Mr. Pearson cannot call anything a "restoration" which not only introduces into the view a wholly new feature that at no former period, near or remote, formed any part of it; but which also offers us such a long perspective of the roof of the Hall itself as it is perfectly certain the original architects carefully avoided.

With this initial objection to Mr. Pearson's design, it is hardly necessary that I should examine the report more minutely. Still, if you will allow me space, I think it should be pointed out that though Mr. Pearson finds foundations of the thirteenth century, and though he proposes to place on them a building in the style of the fourteenth, no "restoration" can be intended; for where we know that apartments existed, some of considerable size and at right angles to the axis of the Hall, Mr. Pearson offers us an open cloister on the ground floor extending the whole length of the building, with the alternative of a similar building glazed. Mr. Pearson speaks of "divers lodgments" of the time of Richard II., the time, that is, which he professes to have chosen, and yet these chambers between the buttresses are to be "restored" into a long, continuous, and undivided carriage shed. With regard to the windows, Sir Christopher Wren, in a sketch, shows a view of some which were in this part of the building. There were "two in two of the bays, but the internal arrangements of the rooms rather point to these being later insertions." These are Mr. Pearson's words. If this design is to be a "restoration," how can we reconcile them with the existence of windows in pairs all along the new building? Again, Mr. Pearson says, enigmatically, "but little of the restoration is conjectural." Now, by his own showing, with the exception of the height of the wall, and the probability that the parapet was embattled, it is not only all conjectural, but, as I have pointed out in the matter of the windows, it is contrary to the few facts we do know.

One word, in conclusion, as to the towers at the northern end. All the evidence we have shows them to have been always much as they are now. But Mr. Pearson condemns them as having "an air of spuriousness." He proposes to rebuild them, adding greatly to their height. According to the thorough-paced restorer, therefore, it is better to be spurious than to seem so. It is better actually to falsify the history of a building than to leave on it a very slight suspicion of such a falsification.

### ROMAN BATH.

A PAPER was read by the Hon. and Right Rev. Dr. Clifford, Bishop of Clifton, at the Literary and Philosophical Association of Bath, on "The Vicissitudes of the City." According to the report in the *Bath Herald*, the bishop said that the hot springs were no doubt the inducement which led the Romans to Bath, but the origin of the town itself might be accounted for in one of two ways. Either the Romans built a town and then adorned it with baths, or else they, in the first instance, erected baths, round which a town sprung up, on which in progress of time was conferred the privilege of a Roman colony. This latter course was the one that most probably was adopted. After describing Roman baths as establishments which were not exclusively devoted to bathers, but as having halls for training purposes and instructions of various kinds, and as being frequented by philosophers, rhetoricians, lecturers and their disciples, Bishop Clifford said it seemed highly probable that the enclosure which marked the walls of Mediæval Bath was in its first origin not the wall of a Roman town, but the enclosure of the thermæ. That at a later day (still during the Roman period) they became utilised as walls of the town he thought was true. The nine colonies in Britain were not all established at once, but by degrees. The military colonies were settled first. Bath, a civil colony which owed its promotion, no doubt, to the interest of the many influential persons who had chosen it for their residence, was amongst the later ones. Tacitus mentioned baths as one of the institutions to which the Romans had recourse in order to teach the Britons to adopt the manners of Rome. No baths in Britain could bear comparison with those of Bath. Bath, therefore, in this respect must have stood foremost amongst the centres of civilisation in Britain. The period comprised between the latter portion of the second century and the early part of the fourth—from the Emperor Severus to the Emperor Constantine—was that of Bath's greatest prosperity. The baths must then have been seen in all their splendour; the colony had reached its largest dimensions. Not only were there numerous Christians in Bath in the second and third century, but the public use of pagan worship had been abolished, and Christian worship had been publicly and officially established in Bath under Roman rule, well nigh a century before the Romans departed from this country. On the first establishment of Christianity under Constantine a destruction of pagan temples on a large scale took place. The temple of Minerva at Bath, though probably not destroyed, was certainly deserted, and was either allowed to fall into decay or (which was not improbable) was utilised for secular purposes. Another change, small in itself, but which was interesting in connection with the history of Bath, must have taken place about this time. With the cessation of the worship of Minerva the name of the goddess began to be dropped in connection with the name of the town. Aquæ Sulis gradually became simply Aquæ or Aquis; this at a later period gave rise to the British form Ack-man, and Cair Ack-man, which the Saxons translated Bathumchester, whence the modern name, Bath. Contemporaneously with the establishment of the Christian



religion they found that the great Roman baths, both in Rome and throughout the empire, began to fall into disuse, the buildings being not unfrequently diverted to other public purposes. Something of this kind must have happened in regard to the thermæ at Bath. Speaking of the subsequent invasions of the barbarians, he said the defences of Bath were not confined to its walls. The whole of the magnificent structures which had been raised at the baths as monuments of taste and splendour were pressed into the service for the defence of the British stronghold. The ruin of Roman Bath was as utter as that of Tyre.

The models of the baths, which were exhibited at the Health Exhibition, are to be shown at New Orleans, with the assistance of Major Davis, the city architect, under whose directions the models were constructed.

### THE NEWLANDS MILL CASE.

ON last Saturday afternoon, at the Bradford town hall, Mr. Henry Mitchell and Mr. Robert Sutcliffe, assisted by the town clerk (Mr. W. T. McGowen), distributed to thirty-two persons the sums awarded to them as the result of arbitration as compensation for the losses and injuries sustained by the fall of Newlands mill chimney in December 1882. For some time past the mayor and Messrs. Mitchell & Sutcliffe have been engaged in bringing about an amicable settlement, the result of which is that they have decided upon between ninety and one hundred cases, the aggregate sum awarded being about 2,500*l.* About thirty of the representatives of these cases assembled in the Borough Court, at the town hall, on Saturday afternoon, and after being addressed by the arbitrators, about 1,500*l.* was distributed among them. No date has been fixed for paying over the remaining sum, but it is intended that there shall be as little delay as possible. Addressing the assembly, Mr. Mitchell said that between 2,000*l.* and 3,000*l.* had been paid by Messrs. Ripley for funeral and medical expenses, and with regard to the 600*l.* for law expenses to which those present were liable for their share, he had collected nearly the whole amount, so that they could receive the awards clear.



#### The Bombay Municipal Buildings Competition.

SIR,—Will you do me the favour of permitting me to acknowledge through you the receipt of the following competitive designs for the new Bombay Municipal Buildings?

##### Motto or Device.

1. Kohinoor. (A)
2. "A thing of beauty is a joy for ever."
3. Drawing-pen.
4. "Corinthian grace to nought gives place."
5. Audaces Fortuna juvat.
6. Queen-Empress.
7. "Where gleam and gloom their magic spell combine."
8. Chiban.
9. Ferio tego.
10. Stet Fortuna Domus.
11. (X)
12. Kohinoor. (B)
13. Bullseye.
14. Perseverando vinces.
15. (R)
16. Utility.

I have the honour to be, Sir,  
Your most obedient servant,  
E. C. K. OLLIVANT,  
Municipal Commissioner.

No. 8,132 of 1884-85.  
Municipal Commissioner's Office, Bombay:  
November 6, 1884.

#### Awards for Ventilators at the Health Exhibition.

SIR,—We observe in your issue of this week that our statements with respect to the non-invitation of certain exhibitors of ventilators to the testing, and the farcical nature of the tests, are fully corroborated by other exhibitors who were also *not invited* to the tests. On the face of this, how can it be asserted, as it is, that *all* were invited?

The more light that is thrown on this lamentable fiasco shows but all the more conclusively that there has been, to put it mildly,

sad mismanagement somewhere, and it is only right, seeing that this is a public matter, that the public should know who is responsible for it, and also that measures should be promptly taken to secure the rectification of the blunder which has been committed, otherwise a lasting reproach will not only rest upon the conduct of Jury 10 and their testing engineer, but upon the Health Exhibition itself, and an injury will be done to the cause of sanitary science by bringing it into ridicule and contempt with the public, that will take many years to eradicate.

As showing the opinion of the press in the matter, we beg to give an extract from a lengthy "leader" which appears in this week's *Health*, by the editor, Dr. Andrew Wilson, F.R.S. :—

In view of the remarks of Messrs. Boyle & Son, published in our present issue, it would appear that some strange mismanagement has overtaken the jury which decided the "Ventilation" awards at the Health Exhibition. If, as Messrs. Boyle say, their well-known ventilators were not included in the list of apparatus tested, and if their position as competing exhibitors has thus been practically ignored, we certainly feel entitled, in the interests of "fair play and no favour," to ask for an explanation of these anomalies. We approve of the demand of Messrs. Boyle not only on account of the alleged grievance of that firm alone, but of all other firms who have competed in the section alluded to, whether they have received awards or not. No firm of inventors can have the slightest satisfaction in receiving any award the fairness and impartiality of which can be called in question. We are certain, therefore, that we only re-echo public sentiment and professional opinion when we ask that such a matter as that to which attention is being directed should be fully investigated. If exhibitions and their juries do not obtain the confidence of the public, the main stay of these institutions is at once sapped and destroyed.

A leading London editor, writing us on the subject, expresses his surprise at such "hankey-pankey doings in an exhibition that is royal, and should be loyal," and says "if exhibitions are to be conducted in that way it would be wiser to stop them."

A correspondent who signs himself "An Architect," says "it is to be regretted that gentlemen more practically scientific were not appointed to adjudicate on ventilators at the Health Exhibition." And he further asks, referring to the tests, "Could any greater farce, in the name of Science, be enacted?" All that we can say in reply to this query is, "Time will show." We believe, after what we have seen, that anything is possible in these days.

Yours, &c.,

ROBERT BOYLE & SON.

64 Holborn Viaduct : Nov. 22, 1884.

SIR,—We trust you will accord us similar courtesy to that extended to other correspondents respecting above. As winners of the gold medal for roof ventilators, we naturally expected that our good fortune, whether merited or not, would be hardly acceptable to those who consider their goods depreciated by such result. Is not, however, this feeling carried too far, when one of your correspondents suggests collusion between the tester and some gentleman on the jury inimical to the firm in question, with a view to exclude their goods or procure the award for another firm? Supposing, for the sake of argument, the testing was inefficient; surely the tester does not forfeit his right to be considered a gentleman? With reference to the testing itself, we presume our ventilator showed better results than those of others competing, or we should not have obtained the award. Is it not common sense to assume that with, if possible, stricter and more reliable tests, we should still be ahead with better proportionate results? We do not wish to be self-assertive, but we fail to see that a bad method of testing must act in our favour and detrimentally to every other maker. Mr. Buchan, for instance, considers he should have shown a better result with a smaller ventilator; some of the ventilators tested, however, must have been similar to this smaller size, but apparently they were not benefited.

We are informed by one of your correspondents that the holder of a silver medal claims the highest award for roof ventilators, on the ground that the gold medal was given for a chimney cowl, which is also referred to by another as an antiquated cowl of twenty-five years ago. These remarks are made for the evident purpose of damaging us and depriving us of any benefit to be derived from the award, and but for them it is unlikely we should have troubled you with this letter. In the first place, we receive the gold medal under class 25, inlet and exhaust ventilators, and no one with an inferior award can claim the position it gives our exhibits under that class. With reference to the object tested, we have used the same pattern in numerous instances for roof ventilators. It is the same in every respect as the Turret ventilator exhibited at our stand, and all the ventilators which we have brought out from time to time are variations in form of exactly the same principle, to suit various styles of architecture as required. This principle was patented by Mr. James Kite, the father of the present head of our firm, and is, we believe, the root of most ventilators at present before the public. If, as Mr. Boyle says, the length of time the public have appreciated his goods is the best test, he cannot surely find fault with us, that after so many years of fancied improvements, modifications, &c., of our original patents



by others, our goods still retain a hold on the public, and have carried off the most important award of recent years. The question of cost, which has not transpired in this correspondence, we also consider a most important factor. If our ventilators did not excel those of other competitors, but equalled them, still, as they are one-third the price, it is to the advantage of the public to support us. We notice a term used, "injuring the cause of sanitary science." Is it possible these gentlemen are all fighting for the benefit of sanitary science, or is it not more natural to consider them as 'cute business men who consider a matter of this kind a capital opportunity to damage a successful rival and at the same time get a free advertisement? It seems to us the mistake they make is that your readers will judge the value of the award by their very apparent vexation at losing it. We are confident of one thing, whatever the tests and whoever had won there would have been a similar outcry from the majority losing; and this would have been much more reasonable if the award had been made without a test. There have been numerous so-called contests, competitions, &c., where the prize has been awarded for what?—a well-displayed stand, or perhaps the magnetic effect of well blended colours, but certainly on no mechanical or scientific test. The result has been blazoned about—gold medal, highest award, &c.; but is not this more absolutely unfair to the defeated competitors than the method respecting which there is so much indignation? Apologising for the length of our letter, which is not an advertisement but merely a protest against the bitterness which your correspondents manifest—certainly undeserved by us and unnecessary in the "interests of sanitary science,"

Yours faithfully,

C. KITE & Co.

Christopher Works, Chalton Street,  
London, N.W.

P.S.—We shall be pleased at any time to take part in any testing where the conditions are the same for all and the tester independent, such as we understand the Sanitary Institution of Great Britain intend instituting.

SIR,—I am glad to observe a correspondence going on in your valuable columns respecting the value of the tests made with ventilators at the late Health Exhibition, as I think the question is one the discussion of which will be of value to the public, as tending to show the unreliability of all such tests and their misleading nature.

I consider that all such so-called scientific experiments which have been, or may be, instituted, can no more demonstrate satisfactorily the relative value of different cowls than they can prove that a plain open pipe is better than a pipe with a cowl on the top of it, and for the following, amongst many reasons that might be given, viz.: within these last seven years I have seen the accounts of at least a score of testings, conducted by different individuals and scientific bodies, and upon comparing the figures given I find that in no two cases do the results agree. A ventilator that in one table of figures is shown as being very powerful and free from down-draught, in other tables is put down as very feeble and subject to strong down-draughts, and ventilators that appear in the first table as practically useless are shown in other tables as highly efficient. The notorious "Kew" experiments, and those now under discussion, are striking instances of what I describe. Now, the important question arises, which of all those conflicting tables is to be accepted as correct, and how is it to be *proved* that the one selected is the *correct one*? I leave this problem for your readers to solve, as I have utterly failed in the attempt myself.

Yours, &c.,  
SCEPTIC.

## ART WORKMANSHIP.

**Worcester.**—The interior of St. George's Catholic Church has been redecorated at a cost of about 300*l*. The old chapel was decorated originally by Owen Jones, before 1851; and so well was the work done that certain portions of the gilding and decoration of the roof have been left untouched in the present restoration, but so blended with the new work that it is impossible to detect them. The chancel and the two side chapels were built about five years ago, and are of the Italian style. The plan in the present decoration has been to combine the old work with the new by a careful harmony of colour and design. Between the windows in the main body of the church are portraits, more or less authentic, of Worcester priests of the seventeenth century, painted by Mr. Goldie, of London. Over the entrance to each of the two side chapels are angels painted on gold backgrounds, with mottoes. The gas standards are by Messrs. Goodman & Ward. The whole of the decorations have been designed and carried out by Mr. R. J. Hopkins.

**The Hooker Window.**—The stained glass window, erected in Bishopsbourne Church, as a memorial of Richard Hooker, the author of "The Laws of Ecclesiastical Polity," has been unveiled. The glass has been executed in accordance with the style of art

prevalent during the fourteenth century, so as to be in keeping with the architecture. The pictures are placed beneath canopies, the whole effect being rich in colour. The window is a large one of five lights, and the subjects illustrate incidents from the latter part of our Lord's life, beginning, in the left hand light, with the *Entry into Jerusalem*, and continuing with *The Last Supper*, *Agony in the Garden*, *Bearing the Cross*, *Crucifixion*, *Taking Down from the Cross*, *Entombment*, *Resurrection*, *Descent of the Holy Spirit*, and finishing in the upper part of the centre light with *Our Lord in Majesty*. In the lower part of the window is a predella of smaller subjects, forming types of those above, viz., beginning from the left hand, *The Manna*, a type of the Last Supper; *Isaac Carrying Wood*, of the *Bearing the Cross*, the *Passion*, of the *Crucifixion*, *Joseph being Lowered into the Pit*, of the *Entombment*, and *Elijah's Cloak Falling upon Elisha*, of the *Descent of the Holy Spirit*. The memorial inscription runs as follows: "In mem. Ricardi Hooker hujus. Eccle. Rect. obt. A.D. 1600." The work has been designed and executed by Messrs. Lavers, Westlake & Co., of London, at a cost of about 400*l*.

## ARCHÆOLOGY.

**Ancient Hackney.**—The extensive and valuable collection of ancient books, deeds, maps, and other documents, forming an almost complete historic record of Hackney, from the days when it was a mere "village neare London" to the present time, has been handed over by its donor, the Rev. R. D. Tyssen, rector of South Hackney, to the special committee appointed by the Hackney Vestry for its reception. One of the large rooms in the town hall has been set apart for the purpose, and as soon as the preparation of the catalogue, itself no inconsiderable task, shall have been completed, the library, under certain regulations, will be open for inspection and reference by the parishioners of Hackney on Tuesday evenings. The vestry has resolved to effect an insurance on the library of 1,000*l*., but that amount does not represent the value of the documents, which Mr. Michael Young, chairman of the committee, describes as "above price," and will prove of the utmost service to local historiographers.

## LEGAL.

**City of London Court.**—November 24.

(Before Mr. COMMISSIONER KERR.)

LEAMING v. DE BEARNE.

This was an action brought by Mr. Leaming, of the Poultry, City, for 11*l*. 16*s*., for work done as a surveyor for Prince De Bearne, of Members' Mansions, Victoria Street, Westminster. The plaintiff stated that he got the order from Mr. Butler, the Prince's architect, to do certain work as a surveyor at Members' Mansions, the freehold of which the Prince had bought. He did it, and had sent in his account, but had not been paid. Mr. Butler, the architect, said he saw the Prince on February 9, 1883, at the Craven Hotel, Craven Street, Strand, when he told witness that he was purchasing the freehold of Members' Mansions. When it was completed, Captain Ross would be his agent, and he (witness) was to act as architect. He also saw the Prince in October last at His Highness's residence in Paris. The tradesmen's accounts were placed before him, including the plaintiff's. Cross-examined: He was suing the Prince himself for work done. The learned Commissioner said he had no evidence that the plaintiff was ordered to do this work by the defendant. In order to do this work the plaintiff would have to show some express or implied authority. There was none here, and he must enter a common law nonsuit.

## CHURCH BUILDING AND RESTORATION.

**Bolton.**—The corner-stone of a new vicarage for St. Mark's church has been laid. The building will be a substantial structure in the Early English style of architecture, and built entirely of brick with terra-cotta facings. The interior woodwork will be of varnished pitch pine. The architect is Mr. Marshall Robinson, and the contract, let for a sum of 1,700*l*., is in the hands of Mr. John Roberts, of Bolton.

**Chorlton.**—The new church of St. Ambrose, Chorlton-on-Medlock, has been opened. The church is of brick, and has been designed in Early English style. It consists of nave and aisle, chancel and chancel aisle, and vestries, and will seat 400 persons. The architect is Mr. H. C. Charlewood, and the contractor Mr. R. Carlyle, of Manchester.

**Croydon.**—A Congregational church is about to be erected in the London Road, West Croydon, for the Rev. J. P. Wilson, from designs prepared by Mr. W. D. Church, architect, 12 South Place, Finsbury. Accommodation is to be provided for about 1,000



persons. The building will be in the Early Decorated style of Gothic architecture.

**Frindsbury.**—The ancient parish church, which dates back to Norman times, has been reopened after restoration and enlargement, at a cost of 5,000*l*. Mr. Bunning, London, has carried out the work from the designs of Mr. J. L. Pearson.

**Hanley.**—The memorial-stone of a Presbyterian church has been laid. The building will be of brick and terra-cotta, with tiled roofs. The architect is Mr. G. W. Bradford, of Hanley, and the builder Mr. George Ellis.

**Edinburgh.**—The memorial-stone of a new church in Drum-sheugh Gardens, has been laid. The church is estimated to cost about 16,000*l*. The architects are Messrs. Campbell-Douglas & Sellars, Glasgow.

**Enfield.**—The memorial-stone of a mission hall at New Lane, Enfield, Middlesex, was laid on Tuesday afternoon, at four o'clock, by Mr. J. Holborn, J.P., Chairman of the Congregational Union. The architect is Mr. W. D. Church, of 12 South Place, Finsbury, and the builder is Mr. E. Linson, of Kensington.

### WORKS IN PROGRESS.

**A Large Consignment of Church Furniture**, including choir stalls and eagle lectern, has just been shipped for use in Christ Church, Georgetown, Demarara, by Messrs. Jones & Willis, of Birmingham and London. They have also in hand, for Holy Trinity Church, Ilkeston, a very handsome pulpit and font.

**The Patent System of Wood Block Flooring**, of Messrs. Geary & Walker, Manchester, has recently been adopted for the following buildings:—Bromley and Beckenham Joint Hospital; Harrow Public School; Southport Convalescent Hospital; Church of The Sacred Heart, Exeter; St. Gabriel's Church, Middleton; Shilbottle Church, near Newcastle; St. Barnabas' Church, Crewe; Stuckey's Branch Banks at Weymouth and Tiverton; St. Michael's Parish Church (restoration), Macclesfield; St. Barnabas' Church, Blackburn; Schools at Swindon; Savings Bank, Hull; Northgate End Chapel, Halifax; Bishop Canning's Church (restoration), Devizes; Presbyterian Church, Lanark; High School, Dunfermline; Offices, Tithebarn Street, Liverpool; "The Uplands," Brighton, for Mr. P. A. Taylor, M.P.; Glossop Hall, for Earl Howard; Roman Catholic Institute, Dublin; Independent Schools, Delph; Offices for the Tyne Commissioners; and The Ladies' College, Ashton-on-Mersey.

### GENERAL.

**Mr. Holman Hunt** has completed the copy of his important picture, the *Flight into Egypt*. The original canvas becoming defective, a piece was inserted, and there are consequently two paintings of the same subject.

**A School of Art for Dumbarton**, a gift to the burgh on the part of several of the citizens, was inaugurated on Tuesday.

**The Committee of the South African Industrial Exhibition** in Cape Town, after payment of expenses, have been enabled to hand a "handsome bonus" to the secretary and architect, and to place 100*l*. in the Standard Bank as the nucleus of an exhibition fund.

**Mr. Whistler** has been elected a member of the Incorporated Society of British Artists.

**Mr. North**, of Rowley Regis, an old pupil of the Wolverhampton School of Art, has sent a sum of 10*l*. towards the fund for acquiring works for the art gallery. This donation has suggested the starting of a movement for inviting the active co-operation of past and present students of the School of Art in support of the art gallery fund.

**A Committee** has been formed for the purpose of relieving the distress which prevails among the Neapolitan painters, sculptors, and bronze-workers. It is proposed to solicit commissions for statuary, copies of frescoes, &c., which will be carried out at a great reduction on the usual prices.

**A Conference of Artisans** was held at Anderton's Hotel, Fleet Street, on Monday, at which it was suggested "that the system of apprenticeship where it exists should be adapted to the modern conditions of industry, and that employers, in taking apprentices and youths into their service, should undertake to see that they attend technical classes a certain number of hours weekly; and, further, that previous to their becoming journeymen their employers should invite them to pass an examination to test their efficiency."

**The Leith Improvement Scheme** is now being carried out, and the first district to be operated on has been feued for building purposes. The principal feature of the scheme is the formation of a spacious street through the heart of the older part of the town.

**Mr. Henry Lord**, of Manchester, has prepared plans for proposed alterations and extensions to be made at the Salford and Pendleton Royal Hospital.

**Mr. W. S. Braithwaite**, of Leeds, has obtained (in a limited competition) the commission for the United Methodist Free Chapel in Headingley, which is to cost 3,600*l*. The same architect has been successful in the competition for St. Alban's Vicarage, Leeds.

**The Subscriptions** for the church of the Sacré-Cœur, Montmartre, have reached 15,000,000 frs., out of which 14,150,000 frs. have been expended on the works.

**The Derby Asylum Competition** has ended in the selection of the following plans:—1st, 100*l*., Mr. B. S. Jacobs, Bowl Alley Lane, Hull ("Lucidus ordo"); 2nd, 75*l*., Mr. Isaac Borrodale, F.R.I.B.A., St. George's Chambers, Grey Friars, Leicester ("Midland"); 3rd, 50*l*., Mr. Arthur Eaton, Commercial Bank Chambers, Derby ("Health and Convenience, with Economy").

**The Spire of All Saints Church**, Newcastle-on-Tyne, which was pronounced unsafe by Mr. R. J. Johnson, diocesan architect, after the storm of January last, has been restored at a cost of 1,050*l*., including some repairs to the roof, towards the payment of which only 500*l*. has yet been obtained.

**At the Parish Church of Woodnesborough**, near Sandwich, two ancient altars and piscinas have been found. They are supposed to have been closed up in the time of Cromwell. The church, which is being restored, is of Norman origin.

**Mr. Charles Trubshaw**, of Derby, has been appointed chief architect of the Midland Railway Company. He succeeds Mr. John H. Saunders, architect of the southern division, recently deceased.

**The Parish Church of St. George's-in-the-Fields, Glasgow**, was totally destroyed by fire on Sunday morning. The damage is estimated to be about 4,000*l*.

**The Paisley Liberal Club Committee** have decided to purchase two extensive sites on the north side of High Street for the erection of new club premises, to cost upwards of 10,000*l*.

**Mr. Jonas Proctor, C.E.**, for nearly twenty years borough surveyor at Bolton, has resigned his post, having accepted the chairmanship of a steamship company, Newcastle-on-Tyne.

**The Llanforda Tunnel**, the second in connection with the Liverpool Waterworks at Verniew, North Wales, has just been completed. The tunnel is 1,607 yards long—116 yards longer than the Cynion Tunnel—and the work of boring it has occupied about two years.

**Public Baths** are to be constructed at Rotherham, at an estimated cost of 3,500*l*., with site. The plans are to be furnished by the borough surveyor.

**The Local Guarantee Fund** for the recent Social Science Congress, at Birmingham, has shown a surplus of about 350*l*., which is to be divided equally between the Birmingham and Midland Institute, the Mason Science College, and the furnishing fund of the Jaffray Suburban Hospital.

**Mr. R. Barratt**, builder, of Leicester, met with his death on Tuesday. He was superintending the lifting of a heavy iron girder at the new gas offices of the Leicester Corporation, when the crane gave way, and the girder fell upon him.

**Messrs. Coghill & Co.** have claimed 14,000*l*. from the Cathcart District Railway Company as balance of contract amount, and for extra works. The case is being heard at Edinburgh before Mr. G. Cunningham, C.E.

**The Divisional Committee** for promoting the Manchester Ship Canal have made arrangements for raising the Parliamentary deposit of 285,000*l*. in January next, as required by the Standing Orders of Parliament.

**Messrs. Tangye** have had an oak casket prepared in Birmingham, which is to contain a copy of the first folio edition of Shakespeare, for presentation to the Public Library of Sydney. The casket is 22 inches long, 16 inches wide, and 15 inches high. It has been executed in Elizabethan style by Messrs. Marris & Norton.

**The Cells** of the Pontefract police-station on being examined this week, and the flooring taken up, brought to light that the foundation had subsided in some cases to the extent of 4 and 5 feet, the walls apparently having been left by the made ground beneath. The old Moot Hall is some hundreds of years of age.

**A Bill** will be introduced in the next session to authorise the erection of the Liverpool Cathedral. It will contain clauses providing for the acquisition of the parish church of St. John, for taking down the building and appropriating the site to the cathedral.

**The Expenditure** on churches at Middlesbrough during the past twenty-one years has amounted to 34,250*l*.

**A Stained Glass Window** has been executed by Messrs. Clayton & Bell for the chapel of the Royal Hants County Hospital, as a memorial of the late Sir William Heathcote.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, NOVEMBER 29, 1884.

### EDITORIAL NOTICES.

*The authors of signed articles and papers read in public must necessarily be held responsible for their contents.*

*No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.*

*Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.*

### TENDERS, ETC.

*As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.*

*Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—"Contract Supplement to THE ARCHITECT."*

### COMPETITIONS OPEN.

FALMOUTH.—Dec. 24.—Plans are required for the Erection of Wesleyan Sunday School Premises, with Class-rooms, &c. Mr. F. L. Earle, Falmouth.

GREAT HORTON.—Dec. 1.—Designs are invited for the Erection of a Board School for 1,000 Children. Mr. J. A. Palmer, Clerk to the Bradford School Board, District Bank Buildings, Market Street, Bradford.

KING'S NORTON.—Jan. 15.—Plans for the Erection of Four Cottage Homes upon Lands situate at Shenley Fields are required. Mr. Ralph Docker, Clerk of King's Norton Union, Colmore Row, Birmingham.

NEWBURY.—Plans are invited for the Erection of the proposed Newbury District Hospital, with necessary Out-buildings and Mortuary. Mr. W. T. Parker Douglas, Newbury.

VENTNOR.—Dec. 8.—Designs are invited for the Construction of an Iron Promenade Pier and Landing Stage. Mr. R. S. Scott, C.E., Surveyor to the Local Board, Ventnor, Isle of Wight.

### CONTRACTS OPEN.

ABERDEEN.—Nov. 29.—For Building Two Houses. Messrs. Jenkins & Marr, 16 Bridge Street, Aberdeen.

ACTON.—Dec. 2.—For Construction of (Contracts 1 to 5) Main Sewers, Effluent Outfall Sewer to Thames, &c. Mr. C. Nicholson Lailey, Engineer to the Local Board, Acton.

ADDINGTON.—Dec. 11.—For Execution of Well-Sinking and Pumping Works. The Borough Engineer, 8 Katherine Street, Croydon.

BARNESLEY.—Dec. 4.—For Construction of Brick Gas-holder Tank. Mr. J. Hutchinson, Engineer, Gas Offices, Barnley.

BELFAST.—Dec. 18.—For Heating Post Office. Mr. W. B. Soady, Secretary, Office of Public Works, Dublin.

BOLTON.—Dec. 2.—For Widening and Reconstructing Church Bank Bridge. Borough Surveyor, Town Hall, Bolton.

BRADFORD.—For Excavating for Post Office. Messrs. J. & W. Beanland, Harris Street, Bolton.

BRADFORD.—Dec. 4.—For Building Sixteen Houses. Mr. R. Calvert, Architect, 9 New Kirkgate, Bradford.

BURNLEY.—Dec. 10.—For Supplying Cast-iron Pipes. Mr. E. Filiter, C.E., 16 East Parade, Leeds.

CARDIFF.—Dec. 4.—For Laying Water Mains (Four and a half Miles—Contract No. 6).—Mr. J. A. B. Williams, C.E. Queen's Chambers, Queen Street, Cardiff.

CARLINGFORD.—Dec. 3.—For Execution of Works at Harbour. Mr. W. C. Browne, Carlingford.

CHELSEA.—Dec. 3.—For Engineering Work in Fitting Wing of Infirmary with Hot-water Supply and Warming Apparatus. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

CHESTER.—Nov. 29.—For Building Museum, Science and Art Schools. Mr. T. M. Lockwood, Architect, 83 Foregate Street, Chester.

CULDAFF.—Dec. 3.—For Construction of Pier (concrete) and Approach Road, and for Deepening Harbour by Rock Excavation. Mr. W. B. Soady, Secretary, Office of Public Works, Dublin.

DUBLIN.—Dec. 3.—For Building Bath Rooms and Water Closets at Workhouse. Mr. Byrne, Architect, 52 Dame Street, Dublin.

DURBAN.—Dec. 15.—For Supply of Cast-iron Water Pipes (1,000 tons), &c. South African Mercantile Agency, 9 King William Street, E.C.

ELLAND.—Dec. 2.—For Building Police Station. Mr. J. Vickers Edwards, West Riding Surveyor, Wakefield.

FAIRLAND.—Dec. 1.—For Additions to Allan Park House. Mr. David Storrar, Architect, Cupar Fife.

GREAT EASTERN RAILWAY.—Dec. 1.—For Works and General Repairs and Alterations for 1885. Mr. John Wilson, Engineer, Liverpool Street Station.

HALIFAX.—Dec. 5.—For Building Board Schools at Cross Hills. Messrs. Horsfall & Williams, Architects, Post Office Buildings, Halifax.

HASLINGDEN.—Dec. 1.—For Enlarging Mill at Grane. Mr. J. Whitaker, Architect, 16 Manchester Road, Haslingden.

KENDAL.—Dec. 2.—For Building House. Mr. J. Bingley, Architect, 7 Lowther Street, Kendal.

LAISTERDYKE.—Dec. 4.—For Erection of Goods Warehouse and other Buildings, Retaining and Boundary Walls, at Plaintrees Sidings. Mr. W. Kell, Engineer, 10 Queen Street, Leeds.

LANCASTER.—Nov. 29.—For Additions to Laundry. Mr. T. Abbott, Clerk of Works, County Asylum, Lancaster.

LIMERICK.—Dec. 4.—For Building Schools. Messrs. Nash & Son, 85 George Street, Limerick.

LONDON.—Dec. 10.—For Completion of Infirmary, Harrow Road. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

MAINDER.—For Building Two Villas. Mr. E. A. Lansdowne, Architect, 26 High Street, Newport, Mon.

NEATH.—Dec. 1.—For Building Clubhouse. Messrs. Kempthorne & Sons, Solicitors, Neath.

NEWCASTLE-ON-TYNE.—Dec. 15.—For Constructing and Fitting up Public Baths and Washhouses. Messrs. Gibson & Allan, Architects, 3 St. Nicholas' Buildings, Newcastle-on-Tyne.

NEWRY.—Dec. 10.—For Excavating Channel between Newry River and Carlingford Lough. Mr. J. Barton, C.E., Exchange Buildings, Dundalk.

Oporto.—Dec. 15.—For Construction of Covered Market. Senor J. A. Correa de Barros, President of the Municipal Board of Oporto, Portugal.

PECKHAM.—Nov. 29.—For Enlarging Sub-district Post Office. H. M. Office of Works, 12 Whitehall Place, S.W.

PLYMOUTH.—Nov. 29.—For Building Board Schools. Mr. H. J. Snell, Architect, Courtenay Street, Plymouth.

RYDAL.—Dec. 6.—For Chancel to Church. Mr. Robert Walker, Architect, Windermere.

SEDBERGH.—Dec. 1.—For Restoring Parish Church. Mr. W. Wright, Surveyor, Lancaster.

SOUTHAMPTON.—Dec. 15.—For Building Infant School, &c., and Additions to York Buildings Board School. Mr. E. T. Howell, Architect, 6 Portland Street, Southampton.

SOUTH STONEHAM.—Dec. 1.—For Works at the Workhouse. Mr. W. H. Mitchell, Architect, 8 Portland Street, Southampton.

SPITEAT.—Dec. 8.—For Building Dwelling-house on Farm. Mr. Williams Brims, Architect, Wick.

ST. IVES.—Nov. 29.—For Building Infants' School and Class rooms, and Repairs to Girls' School. Mr. E. W. Robb, Architect, St. Ives, Hunts.

TEBAY.—Dec. 4.—For Erection of Farm Buildings. Messrs. Hoggarth Bros., Architects, Kendal.

THORNTON.—Dec. 5.—For Building Fire-Clay Works. Mr. John Drake, Architect, Winterbank, Queensbury.

WEETON.—Dec. 3.—For Building Two Cottages. Mr. William Bell, Architect, North-Eastern Railway, York.

WEST HARTLEPOOL.—Dec. 3.—For Building Foreman's House and Nine Cottages. Mr. Bell, Architect, Central Station, Newcastle-on-Tyne.

WIDNES.—Dec. 1.—For Reconstruction of Brick Culverts. Mr. Copland, Engineer to the Local Board, Widnes.

WHITEHAVEN.—Dec. 1.—For Enlarging Oddfellows' Hall. Mr. J. S. Moffat, Architect, Whitehaven.

WISBECH.—For Building Pair of Villas. Mr. C. F. Langford, Architect, Colville Road, Wisbech.

WOODBURY DOWN.—Dec. 3.—For Building Police Station. Office of the Receiver, 4 Whitehall Place, S.W.

### TENDERS.

#### ABERDEEN.

For Three Self-contained Houses in Fountainhall Road, Aberdeen. Messrs. ELLIS & WILSON, Architects. Quantities by the Architects.

Gauld & McKenzie, mason work.

Smith & Tolmie, carpenter work.

Pirie, slater work.

Henderson, plaster work.

Matthews, plumber work.

Slaker & Sons, painter and glazier work.

#### ACTON.

For the Erection of Gardner's Cottage on the Lawn-tennis Ground, Cumberland Park, Acton, for Mr. C. F. Allison. Mr. ALFRED WRIGHT, Architect and Surveyor, Belgrave House, 190A Brompton Road, and 18 Haytor Road, Brixton Rise. £250 0 0

#### BAGSHOT.

For the Erection of a House on Heatherside Estate, Bagshot, Surrey, for Sir Gabriel Goldney, Bart., M.P. Mr. W. D. CHURCH, Architect, 12 South Place, Finsbury, E.C.

TINSON, Kensington (accepted).

#### BRADFORD.

For Building Residence for Dr. Brydon. Mr. H. ISITT, Architect, Bradford. Ivys & Co, Shipley (accepted) £740 0



## BRAY.

For Constructing Retaining Wall for the Commissioners. Mr. P. F. COMBER, Surveyor.		
Dixon, Kingstown . . . . .	£400	0 0
Pemberton, Dublin . . . . .	350	0 0
Pluck, Kilmaconogue . . . . .	300	0 0
BRADY, Bray (accepted) . . . . .	280	0 0
Laying Water Mains.		
PLUCK (accepted) . . . . .	80	0 0

## CARDIFF.

For Completing Twenty three Houses in Romilly Road, Clive Road, and Fern Street, Cardiff, for Mr. W. H. Cory. Mr. J. P. JONES, Architect, 27 Park Street, Cardiff.		
Gibbs . . . . .	£1,339	0 0
Hartnell . . . . .	1,315	0 0
Thomas & Walters . . . . .	972	0 0
GREEN (accepted) . . . . .	925	2 0
For Completing Eleven Houses in Daisy Street, Cardiff, for Mr. W. H. Cory. Mr. J. P. JONES, Architect, 27 Park Street, Cardiff.		
Thomas & Walters . . . . .	£220	0 0
Geen . . . . .	192	1 0
Gibbs . . . . .	173	10 0
Hartnell . . . . .	170	10 0

## CARSHALTON.

For Small Hall and Offices for the Local Board of Health, Carshalton, Surrey, for the Carshalton Public Hall Company, Limited. Mr. J. D. HAYTON, Architect. Quantities prepared by Mr. C. R. Griffiths, Bank Chambers, Tooley Street, London Bridge.		
Brazier & Son, London . . . . .	£770	0 0
Dawes, London . . . . .	680	0 0
Sabey & Son, London . . . . .	634	0 0
Messom, Twickenham . . . . .	629	0 0
Taylor, London . . . . .	623	0 0
Maides & Harper, Croydon . . . . .	591	0 0
Lilley & Anderson, Wallington . . . . .	577	17 9
W. & F. Croaker, London . . . . .	568	0 0
Dearing & Son, London . . . . .	556	5 8
Smith & Son, South Norwood . . . . .	547	0 0
Cook, London . . . . .	536	0 0
Hazell, Mitcham . . . . .	530	0 0
Deacon & Co., Lower Norwood . . . . .	493	0 0
Taylor, Croydon . . . . .	490	0 0
Pearson, Croydon . . . . .	485	0 0
Coles, Croydon . . . . .	477	0 0
Potter, Sutton . . . . .	477	0 0
Clark, Wallington . . . . .	473	0 0
Howe & White, Wallington . . . . .	470	0 0
Richardson, Carshalton . . . . .	451	0 0
Humphris, Sutton . . . . .	450	0 0
Stewart, Wallington . . . . .	448	0 0
Burnard, Wallington . . . . .	445	0 0
Sedgwick, Croydon . . . . .	436	0 0
EVANS, Carshalton (accepted) * . . . . .	397	0 0

\* Subject to modifications.

## CHATHAM.

For Construction of Proposed Pier, Chatham. Mr. LAWES, Engineer.		
Matthews, Shaw & Co., London . . . . .	£6,850	0 0
Dickson & Thorn, London . . . . .	6,115	0 0
Jukes, Coulson & Stokes, London . . . . .	5,140	0 0
Kellett & Bentley, London . . . . .	4,515	0 0
Thompson, Chatham . . . . .	4,005	0 0
TAYLOR & NEATE, Rochester (accepted) . . . . .	3,987	0 0

## DARTMOUTH.

For Construction of Reservoir at Crosby Meadows, Dartmouth, and for Providing and Laying Iron Water Mains for the Town Council. Mr. E. H. BACK, C.E., Borough Surveyor.		
Hawking & Best, Teignmouth . . . . .	£862	12 6
Snaddock Bros., Mntley, Plymouth . . . . .	844	0 0
HAWKINS, Dawlish (accepted) . . . . .	647	0 0

## DELPH.

For Building Branch Bank for the Manchester and County Bank, at Delph. Messrs. JAMES LAWTON & SON, Architects, St. Chads, Upper Mill, Saddleworth. Quantities by Mr. F. S. Smith.		
Accepted Tenders.		
Hinchliffe, mason . . . . .	£1,366	0 0
Hewkur Bros., joiner . . . . .	645	0 0
Hudson, plumber . . . . .	148	0 0
B. & H. Whitehead, plasterer . . . . .	63	0 0
Mellor, slater . . . . .	47	0 0
Platt, painter . . . . .	35	0 0
Total . . . . .	£2,304	0 0

## DUDLEY.

For Works in Well Street, Dudley.		
Bennett & Bates, Bilston . . . . .	£132	6 0
Hughes, Lower Gornal . . . . .	110	0 0
Jevons, Dudley . . . . .	85	0 0
BERRY, Dudley (accepted) . . . . .	83	10 0

## EARL SHILTON.

For Building Six Cottages at Earl Shilton.		
J. & W. Harold, Hinckley . . . . .	£1,200	15 6
Norton, Stour Stanton . . . . .	960	0 0
Stokely, Stapleton . . . . .	954	0 0
Foxon, Hinckley . . . . .	933	0 0
Lockley, Barwell . . . . .	920	0 0
White, Barwell . . . . .	825	0 0
Herbert, Barwell . . . . .	803	0 0
Armstone, Barwell . . . . .	790	0 0

## KINGSTOWN.

For Construction of Pipe Sewer, Crosthwaite Park, Kingstown. Mr. F. A. DOYLE, Surveyor.		
Ryan, Kingstown . . . . .	£385	0 0
Simpson, Dublin . . . . .	320	0 0
G. Dixon, Kingstown . . . . .	310	0 0
M. Dixon, Kingstown . . . . .	290	0 0
LENE, Kingstown (accepted) . . . . .	269	10 0

## LEEDS.

For Alterations and Building new Wing to Allerton Hall, rear Leeds, the Residence of Mr. W. L. JACKSON, M.P. Mr. THOMAS WINN, Architect, 18 Park Lane, Leeds. Quantities by the Architect.

## Accepted Tenders.

Nicholson & Son, bricklayer, mason, and joiner.		
Franks & Evans, plasterer.		
Lindley, plumber.		
Seasons, slater.		
Simpson, bellhanger.		
Pape, lead & stained windows.		
Dawson & Nunneley, ironfounder.		
Total, £1,732 18s. 6d.		

For Building Four Houses and Alterations to adjoining Properties at Headingley, near Leeds, for Mr. William Cawthorn. Mr. THOMAS WINN, Architect, 18 Park Lane, Leeds. Quantities by the Architect.

Accepted Tenders. £2,212 0 0

For Building new Offices, Model Making and Storing Shops, new Foundry and Drawing Offices at the Old Foundry Steam Crane Works, Rodley, near Leeds, for Mr. Thomas Smith. Mr. THOMAS WINN, Architect, 18 Park Lane, Leeds. Quantities by the Architect.

NICHOLSON &amp; SON (tender accepted for the whole of the works) . . . . . £2,315 0 0

For Alteration of Premises in Albion Street, Leeds, for Mr. Samuel James Brown. Mr. THOMAS WINN, Architect, 18 Park Lane, Leeds. Quantities by the Architect.

Irwin & Co. . . . .	£640	0 0
Longley Bros. . . . .	672	0 0
Tomlinson & Sons . . . . .	690	0 0
Thorp . . . . .	599	0 0
FRANKS & EVANS (accepted) . . . . .	554	0 0

## LEIGHTON BUZZARD.

For Building Small-pox Hospital, Leighton Buzzard.		
Tutt . . . . .	£392	15 0
Webb . . . . .	889	10 0
Whiting . . . . .	885	0 0
Dawson . . . . .	881	0 0
Miles . . . . .	855	0 0
Muckleston . . . . .	838	10 0
Underwood & Son . . . . .	835	10 0
SEAR (accepted) . . . . .	825	0 0

## LONDON.

For Repairs and Decorations to No. 40 Lansdowne Road, Notting Hill, for Mr. C. F. ALLISON. Mr. ALFRED WRIGHT, Architect and Surveyor, Belgrave House, 10A Brompton Road, and 18 Hayter Road, Brixton Rise.

Burton . . . . . £155 0 0

For Repairs, &c., 15 Green Street, Grosvenor Square. Mr. EDWIN T. HALL, A.R.I.B.A., Architect, 57 Moorgate Street.

Lynole . . . . .	£189	0 0
TAVENER & SONS (accepted) . . . . .	182	0 0

For Making-up and Paving Snargate Street, Hammer-smith.

Rogers & Dickens . . . . .	£245	0 0
Nowell & Robson . . . . .	235	0 0
Mears . . . . .	230	0 0
Owen & Brown . . . . .	217	15 0
Jones & Whimpey . . . . .	215	0 0
Bendon . . . . .	205	18 6
Carter . . . . .	205	0 0
Coate . . . . .	192	0 0
Surveyor's estimate . . . . .	225	0 0

For the Erection of a Shoe Factory at Starch Green, W., for Messrs. Peal & Co. Mr. T. CHATFIELD CLARKE, F.R.I.B.A., Architect. Quantities by Mr. H. H. Leonard.

		Wrought
		Timbers.
Colls & Sons . . . . .	£2,935	0 0
Grover . . . . .	2,934	0 0
Woodward . . . . .	2,865	0 0
Chappell . . . . .	2,815	0 0
Brown, Son & Blomfield . . . . .	2,775	0 0
J. & J. Geenwood . . . . .	2,750	0 0
Ashby Bros. . . . .	2,699	0 0
Lawrance & Sons . . . . .	2,695	0 0
Hall, Baddall & Co. . . . .	2,620	0 0
Nightingale . . . . .	2,620	0 0
		70 0 0

For Heating the Metropolitan Asylum, Leavesden. BACON & Co., London (accepted).

For Heating the Church of Our Lady and St. Philip Neri, Lower Sydenham. BACON & Co., London (accepted).

For Building Board School, Ecclesbourn Road. Mr. E. R. ROBSON, Architect.

Kearley . . . . .	£14,274	0 0
Dove Bros. . . . .	13,909	0 0
Downs . . . . .	12,693	0 0
Brass . . . . .	12,622	0 0
Johnson . . . . .	12,422	0 0
Grover . . . . .	12,373	0 0
Goodman . . . . .	12,222	0 0
Scrivener & Co. . . . .	12,156	0 0
Oldrey . . . . .	12,100	0 0
Holloway . . . . .	12,093	0 0
Wall Bros. . . . .	12,042	0 0
Bangs & Co. . . . .	11,998	0 0
Hart . . . . .	11,995	0 0
Cox . . . . .	11,987	0 0
Shurmer . . . . .	11,970	0 0
Kirk & Randall . . . . .	11,944	0 0
Croaker . . . . .	11,934	0 0
Stimpson & Co. . . . .	11,924	0 0
Wall . . . . .	11,891	0 0
Howell & Son . . . . .	11,837	0 0
Tougue . . . . .	11,819	0 0
Atherton & Latta . . . . .	11,695	0 0
Jerrard . . . . .	11,589	0 0

## LONDON—continued.

For Enlargement of Board School, Laystall Street, Mr. E. R. ROBSON, Architect.

Kearley . . . . .	£10,136	0 0
Williams & Son . . . . .	9,928	0 0
F. & F. J. Wood . . . . .	9,917	0 0
Bangs & Co. . . . .	9,435	0 0
Pritchard . . . . .	9,397	0 0
Shurmer . . . . .	9,387	0 0
Turtle & Appleton . . . . .	9,357	0 0
Goodman . . . . .	9,333	0 0
Holloway Bros. . . . .	9,253	0 0
Lathey Bros. . . . .	9,233	0 0
Johnson . . . . .	9,193	0 0
Grover . . . . .	9,166	0 0
Brass . . . . .	9,120	0 0
Kirk & Randall . . . . .	9,080	0 0
Holloway . . . . .	9,079	0 0
Wall Bros. . . . .	9,035	0 0
Stimpson & Co. . . . .	9,008	0 0
Howell & Son . . . . .	8,975	0 0
Scrivener & Co. . . . .	8,951	0 0
Oldrey . . . . .	8,890	0 0
Atherton & Latta . . . . .	8,853	0 0
Wall . . . . .	8,801	0 0
Cox . . . . .	8,300	0 0
Jerrard . . . . .	8,579	0 0

For Covered Playgrounds to Board Schools.

	Rapier Street.	
Cox . . . . .	£232	0 0
Whitford & Co. . . . .	228	0 0
Riley Bros. . . . .	225	0 0

	Surrey Lane.	
Rowton, Chambers & Co. . . . .	280	0 0
Williams & Co. . . . .	231	0 0
Wall . . . . .	210	0 0

	Grange Road.	
Whitford & Co. . . . .	332	0 0
Oldrey . . . . .	272	0 0
Ewart & Son . . . . .	193	10 0

	Townsend Street.	
Oldrey . . . . .	232	0 0
Whitford & Co. . . . .	196	0 0
Ewart & Son . . . . .	167	15 0

	Single Street.	
Riley Bros. . . . .	115	0 0
Holden & Co. . . . .	105	0 0
Atherton & Latta . . . . .	98	0 0

	Malmesbury Road.	
Holden & Co. . . . .	193	0 0
Perry & Co. . . . .	190	0 0
Riley Bros. . . . .	181	0 0

For Shops and Offices in Broad Street, for Mr. Edward Lukyn. Mr. EDWIN T. HALL, A.R.I.B.A., Architect, 57 Moorgate Street. Quantities by Mr. G. A. Fryce-Cuxson, Westminster Chambers, and Mr. E. Overall, Henrietta Street, Covent Garden.

Brass . . . . .	£6,371	0 0
Clarke & Bracey . . . . .	6,280	0 0
J. & J. Greenwood . . . . .	6,197	0 0
Colls & Sons . . . . .	6,176	0 0
Holland & Hannen . . . . .	6,075	0 0
Foster & Dicksee . . . . .	5,950	0 0
Woodward . . . . .	5,926	0 0
BANGS & CO. (accepted) . . . . .	5,690	0 0

## NOTTINGHAM.

For Building Board School, Bosworth Road, Nottingham. BRADLEY & BARBER (accepted) . . . . . £7,645 0 0

For Building five Shops, Gedling Street, Nottingham. Mr. BROWN, Borough Engineer.

Cordon . . . . .	£810	0 0
Baynes . . . . .	707	3 0
Fisher & Co. . . . .	700	0 0
Messon . . . . .	697	0 0
Lynam & Kidd . . . . .	691	0 0
Attenborough . . . . .	675	0 0
Woolston . . . . .	670	0 0
Hodson & Son . . . . .	665	0 0
Lawson . . . . .	662	0 0
Crookes . . . . .	660	0 0
Ireson & Co. . . . .	654	0 0
Warnaby . . . . .	649	0 0
Middleton . . . . .	640	0 0
Darby . . . . .	635	10 0
B. H. & Son . . . . .	623	11 0
Adams . . . . .	602	10 0
Wheatley & Maule . . . . .	590	0 0
Guy . . . . .	578	0 0

All of Nottingham.

## POOLE.

For Construction of Wall upon the West Shore.

	Timber.	Stone.
Perkins & Co. . . . .	£253 15 8	£565 5 0
Dunford . . . . .	250	0 0
Gray . . . . .	210	0 0
Rigler & Crane . . . . .	198	0 0
Whetham . . . . .	195	0 0
Hayter . . . . .	122	0 0

	Concrete.	
Perkins & Co. . . . .	519	10 0
Whetham . . . . .	355	0 0
Dunford . . . . .	350	0 0
Gray . . . . .	295	0 0
Pond . . . . .	253	5 0
Rigler & Crane . . . . .	250	0 0
HAYTER (accepted) . . . . .	195	0 0

## WEST BROMWICH.

For Execution of Main Drainage Works (Contract No. 2), Construction of Sewers, &c., West Bromwich. Mr. J. T. BAYNS, Borough Engineer.

Palmer, Birmingham . . . . .	£10,588	19 8
Slinger, Cleckheaton . . . . .	9,723	16 2
Curral & Lewis, Birmingham . . . . .	8,904	13 4
Small & Son, West Bromwich . . . . .	8,825	9 4



**SOUTHPORT.**

For Supplying and Fixing Railings on the East Side of Bankfield Lane, Southport. Mr. W. CRABTREE, Borough Surveyor.

Whitehead & Foster, Southport	£91 0 0
Watts, Barrow-in-Furness	49 4 0
Morris, Southport	44 10 0
Wright Bros., Southport	37 15 0
Fairbridge & Hatch, Birkdale	37 6 0
HUGHES, Southport (accepted)	35 14 0
Tew, Birkdale	33 0 0

*Bricks.* Per 1,000.

Crompton, Southport	£1 8 6
Platt & Co., Newburgh	1 8 6
Winnard & Taylor, Parbold	1 8 6
Littlewood Brick & Tile Company, Croston	1 8 6
Platt, Burrough Junction	1 7 0
PALMER, Scarisbrick (accepted)	1 7 0
Gaskell, Southport	1 6 0

**STALYBRIDGE.**

For Painting Market Hall, Stalybridge. BURGESS (accepted)

	£75 10 0
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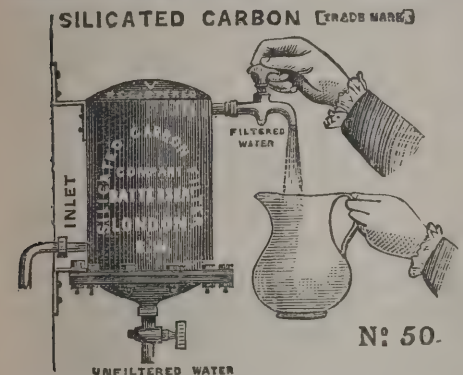
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SOLID WOOD  
FLOORING.**

Full particulars post free. SAMUEL PUTNEY, Baltic Wharf, Harrow Road, Paddington, London, W.  
12 Elm Street, Gray's Inn Road, W.C.

**STROUD.**

For Construction of Sewers (4 903 yards), with Manholes, &c., Outfall and Intercepting Tanks, Stroud. Mr. J. P. LOTHOUSE, C.E., Engineer. Quantities by the Engineer.

*Contract No. 1.*

Small & Sons, West Bromwich	£2,727 0 0
Bottoms Bros., Battersea	2,713 0 0
Greenslade, Stroud	2,565 0 0
Whetham, Weymouth	2,495 0 0
Cooke & Co., Battersea	2,394 0 0
Welsh, Hereford	2,358 0 0
Young & Co., Hertford	2,283 0 0
Williams, Swansea	2,285 0 0
Cowdery & Sons, Newent, Glos.	2,274 0 0
Dickson, St. Albans	2,156 0 0
Hawkins, Dawlish	2,097 0 0
AMBROSE & SON, Bath (accepted)	1,948 0 0
Engineer's estimate	2,465 0 0

**WOLVERHAMPTON.**

For Building Engine-house and for Foundations at Pumping Station, Tettenhall, Wolverhampton. Mr. LYONS WRIGHT, C.E., Engineer. Quantities by Mr. G. H. Stanger, C.E.

BRADNEY & Co., Wolverhampton (accepted)	£1,245 0 0
---	------------

**BEST BATH STONE.**  
**WESTWOOD GROUND,** BOX GROUND  
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200,000 cubic ft. of SUMMER-DRIED  
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GOLD MEDAL, International Health  
Exhibition, 1884.

**GRUNDY'S PATENT  
WARM-AIR  
VENTILATING FIRE GRATE.**

The novelty, superiority, and advantage of this patent consist in the heating surface being greater than any other Fire-grate introduced to the public. It is very simple in construction, and is made in the form of a Stove, the back of which is semicircular in shape, with gills behind and smoke-nozzle on top, all cast in one piece. The same can be attached to any design of a Register or Stove front. It is very suitable for schools, class-rooms, waiting-rooms, hospitals, offices, dormitories, and dwelling-houses, from the cottage to the mansion. Design and specification post free on application.

TESTIMONIALS.

"9 Victoria Chambers, Westminster, S.W.  
"June 10, 1884.

"SIR,—I have much pleasure in testifying to the efficiency of your patent Warm-Air Fire Grate. It has been very successful, and given every satisfaction where I have used it.  
"Yours, &c.  
"JAMES WEIR, F.R.I.B.A.

"To Mr. Grundy."  
"Baptist Chapel, Clapham Common, London. Richard Webb, Pastor, 10 Grafton Square.  
"February 15, 1884.

"DEAR MR. GRUNDY,—I have pleasure in testifying to the excellency and efficiency of your patent Fire-Grate. It is the most charming invention for heating a large room I have ever known. I shall have pleasure in showing it to anyone who wish to have their schools or rooms pleasantly and efficiently heated."  
From James Garry, Esq., Architect, West Hartlepool, July 1884.

"DEAR SIR,—I have very great pleasure in stating that the first stove, or patent warm-air ventilating fire grate, adopted by me in school at Seaton, and a second in a Cocoa Palace, have given such satisfaction that I now order eleven to be inserted in New Upper Grade Schools in course of erection at West Hartlepool. They are the most economical, efficient, and easily managed stove at present before the public.  
"Mr. John Grundy."

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Works—TYLDESLEY, near MANCHESTER;

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For Construction of Teignmouth and Shaldon Main Drainage Works. Mr. G. CROW, Surveyor. Teignmouth.

Pethick & Co., Plymouth	£10,373 0 0
Shaddock, Saltash	9,900 0 0
Gunn, Tiverton	9,420 16 7
Colridge, Exeter	8,481 0 0
Delbridge, Cranborne	8,172 0 0
SANDERS, Southampton (accepted)	8,098 0 0
Gibson, Exeter	8,060 0 0
Ambrose & Son, Bath	8,057 16 8
Hawkins, Dawlish	8,022 0 0
Finch & Son, Plymouth	7,958 0 0
Whetham, Weymouth	7,840 0 0

*Shaldon.*

Pethick & Co., Plymouth	2,059 0 0
Reynolds, Exeter	2,016 3 7
Finch & Son, Plymouth	1,900 0 0
Delbridge, Cranborne	1,870 0 0
Colridge, Exeter	1,650 0 0
Whetham, Weymouth	1,634 0 0
Hawkins, Dawlish	1,600 0 0
Ambrose & Son, Bath	1,597 2 6
SANDERS, Southampton (accepted)	1,548 0 0
Gunn, Tiverton	1,493 0 0
Shaddock, Saltash	1,479 0 0

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Colourless—Non-Poisonous—Gives no Stain.  
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# BELL'S ASBESTOS.

## BELL'S ASBESTOS FLOORING FELT.

This article is manufactured from specially prepared Asbestos fibre, and by its use any building can be rendered comparatively fireproof at a very small cost. This material should be used as a substitute for brown paper under the carpet, and it can be taken up and relaid as often as required; it may be laid between the flooring boards, on the ceiling before plastering, and on the walls. Doors of pine or other wood should be so constructed as to have a sheet of the felt in the centre, so that either side being burned the other remains intact. In houses so protected fires would be localised to the rooms in which they originate. Asbestos felt, being a non-conductor of heat, is superior to any other sheathing, and used under slates has no equal. It yields no dust, lies quite flat, is soft to the tread, and its low cost places it within the reach of everybody. Made in rolls of 36 inches wide.

**BELL'S ASBESTOS BOILER AND PIPE COVERING COMPOSITION** for coating every class of steam pipe and boiler. Non-combustible, and easily applied when steam is up; adheres to metals and preserves them from rust; prevents the unequal expansion and contraction of boilers exposed to weather; covers 50 per cent more surface than any other coating, and is absolutely indestructible. It can be stripped off after many years' use, mixed up again with 20 per cent. of fresh, and applied again. The composition is supplied dry, and only requires to be mixed with water to the consistency required for use.

A horizontal boiler, 17 ft. 6 in. long, 15 H.P., gave the following results:—

Temperature on Plates .. .. .	186 deg.
"          Covering .. .. .	94 "

One ton of coal was saved per week, and, although the fire was raked out every evening 20 lbs. of steam were in the boiler next morning.

The following testimonial refers to this covering:—

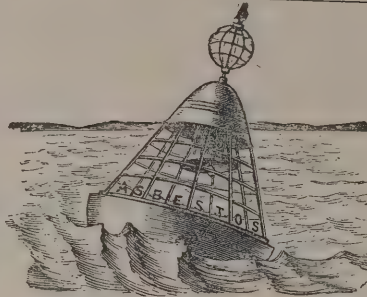
Offices of Wimbledon Local Board, Wimbledon, Nov. 24th, 1883.  
Dear Sir.—It may interest you to know that we save exactly 40 per cent. in fuel through using your covering.—Yours truly,  
W. SANTO CRIMP, C.E., F.G.S.

**BELL'S ASBESTOS PAINT**, for floors, stairs, and all interior woodwork, to prevent the spread of fire. This paint is especially useful in cotton mills, and in fact in all factories and buildings exposed to risk from fire. It is quite free from poisonous ingredients, and is both easily and cheaply applied. Bell's Asbestos Paint has, on several occasions, done great service in preventing the loss of life and property. The great fire in Buchanan Street, Glasgow, in November last, produced the following testimony to the value of this material:—

Offices of the *Glasgow Herald*, the *Weekly Herald*, and the *Evening Times*, Glasgow, Nov. 14th, 1883.  
Mr. John Bell,  
Sir.—As one of the means that helped to save our buildings extending from Buchanan Street to Mitchell Street from the recent great fire, I think it fair to say that your Asbestos Paint, which was applied to the outside hoist of the *Evening Times* case-room and other portions, gave valuable proof that it materially aided in resisting the flames from the immediately adjoining tenement while the fire was rapidly destroying it and threatening us in the most serious form. Since the fire, and to assure myself further of the value of the Asbestos Paint as a fire-resister, I placed a piece of wood, with your paint put on more correctly than in our case, into one of our furnaces, with the result that it was brought out without a fibre of the wood being touched, while similar pieces of wood, thrice coated with Irish Lime, at once got into a flame.—Yours truly,  
(Signed) ALEX. SINCLAIR.

**BELL'S ASBESTOS SASH-LINE CORD** is unaffected by heat and damp, and renders unnecessary the use of metallic wire and chains. Ropes made in the same form have great tensile strength, and being indestructible by fire are of incalculable value for fire escapes.

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## BELL'S ASBESTOS.

The goods of this house are of the highest quality only, and no attempt is made to compete with other Manufacturers by the supply of inferior materials at low prices. All orders must be sent direct to the undermentioned depots, and not through agents or factors.

**BELL'S ASBESTOS AND INDIA-RUBBER WOVEN TAPE AND SHEETING** for making every class of steam and water joint. It can be bent by hand to the form required, without puckering, and is especially useful in making joints of manhole and mudhole doors on boilers; also for large "still" joints, where boiling fat and steam have to be resisted. It is kept in stock in rolls of 100 feet, from 1-in. to 3-in. wide, and any thickness from  $\frac{1}{8}$  in. upwards. Manhole covers can be lifted many times before the renewal of the jointing material is necessary. The same material is made up into sheets about 40 in. square, and each sheet bears the trade mark, without which none is genuine. It is very necessary to guard against imitations of this useful material, and to secure themselves against being supplied with these less useful articles at my price, users are recommended to see that every 10-ft. length of the Asbestos Tape purchased by them bears the trade mark.

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# The Architect.

## THE DECORATION OF THE DOME OF ST. PAUL'S.—II.



THE second meeting of the Institute of Architects devoted to the subject of Mr. STANNUS's paper on the question what internal finish ought to be given to the dome of the metropolitan cathedral—and a truly vexed question it now seems to be—may be said to have done credit to the architectural profession in one sense, but not in another. The debate was lively. The divergence of opinion was wide and wholesome. Enthusiasm was abundantly manifested. Indeed, no little enterprise was displayed of a practical character. But at the end of the evening what could be said to be the result? Some will answer that the only result was entire confusion; and, no doubt, as regards anything like a verdict of the assembly, such would be the fact. But there was something much better than this, and in more ways than one.

Strangers ought to have been pleased to see how earnest the architects were in dealing with the problem as decorative artists, and also as iconologists. Perhaps it might have been better if they had sometimes attempted less in these directions—at any rate in one of them—and more in their own proper line of criticism. But we cannot help regarding the manifestation, nevertheless, as one of favourable import; for if the tendency of the age, as we have so often argued, has taken a strong turn towards the amplification of the architect's artistic authority and responsibility, there could scarcely be offered to the Institute a better subject upon which to encourage the members to exercise their judgment in a broad and comprehensive spirit. Professional decorative painters, it is clearly to be seen, are no longer to be left in independent charge of the great architectural problems of ornament in colour; however strictly the work may be mere superficiality, the more technical judgment of the trained constructor and historical student of articulated building is steadily coming to the front. Not only so, but the more sentimental, or, we may say, poetic prerogative of the architectesque picture-designer is also being assumed by the architect; and, although it is impossible to say that this attitude can be practically maintained beyond a certain limited extent, perhaps it is well, at any rate, within reasonable limits, that the habit of such exercise should be cultivated.

At the same time we may be excused for suggesting a regret that on Monday evening the more strictly professional ground of architectural criticism was so little occupied. Speakers—generally readers, in fact, of little papers, so carefully had they prepared themselves—appeared wholly to forget that the decoration of this dome is primarily an architectural question, and only secondarily a pictorial one; and, we may add, they still more neglected the fact that, except perhaps archæologically, and then only in a very subsidiary way, an architect's views of the hierarchy of heaven ought to be modestly and unofficially expressed. In a general way, the less he studies the Apocalypse the less will he make a fool of himself; and this the meeting had occasion to see.

Last week we discussed, briefly of course, the questions of decorating the dome by ribbed work, coffered work, columnar work (painted), and arched work; leaving to be considered, in the view we were taking of the subject, panel work and vault work. On Monday evening a great deal more was said of *zone work* than on the former occasion, and the contrast between this and rib work was made to turn chiefly upon the rival effects—strange as it may seem—of zones of figures and ribs of figures—the rib work of figures being the most characteristic feature of the now celebrated design left by the late ALFRED STEVENS, whose representative Mr. STANNUS, as his pupil and unswerving adherent, constitutes himself to be.

As the discussion progressed, however, it could not but become apparent how strongly a certain combination of rib work and panel work had, as matter of principle, if perhaps unconsciously, laid hold of the fancy of some of the best designers.

In St. Peter's at Rome (as we have already observed) the *motif* is properly rib work; but, inasmuch as the ribs are not much less than 10 feet wide at the base, corresponding with the width of a pair of coupled columns in the peristyle below, even this example may be regarded as one in which a series of double or coupled ribs serve as a framework for panel work of figure pictures on a very grand scale. In the case of the Invalides at Paris, on a much smaller scale, this principle is developed in a way still more pronounced, indeed, perhaps too much so. In several of the other examples exhibited amongst the illustrations on the walls, the same idea has been plainly accepted and acted upon. In Mr. PENROSE's design for the St. Paul's dome it is so. And in STEVENS's design itself, if properly regarded, it is equally so; for the great heroic figure ribs, which are therein built up with such prodigious force, are almost, if not quite, as wide as the coupled column ribs—for such they still may be called—of THORNHILL's extant picture work.

Now the application of this principle to the case of St. Paul's may be readily accounted for. A great deal was said by some of the speakers about the design of WREN being intended to close its verticality at the peristyle under the concave, whose simple unbroken entablature, they argued, must be regarded as a final feature of absolutely horizontal character, beyond which the unbroken hemisphere rises like the indeterminate vault of the sky. But such criticism overlooks one incident which must surely not be ignored. If the colonnade were as unbroken as the entablature certainly is, well and good; but no one can help seeing that, although the mere columnar arrangement is a perfectly simple disposition, with thirty-two equal intercolumniations, yet the eight blank interspaces convert this, by reason of the effect of the windows, into the very different arrangement of eight prominent triplets of light separated in the most emphatic manner by eight broad piers of wall, corresponding exactly with the octagonalisation of the crux beneath, and distinctly carrying up the octagonal plan from the very base of the architectural composition to its very summit. It is the recognition of this essential and fundamental motive that has prompted—perhaps as we have said, unconsciously—the adoption of the broad-rib principle of St. Peter's, and of the Invalides, by both Mr. PENROSE and STEVENS, by THORNHILL also, and, we may add, by BURGESS. The octagonal plan of WREN is, in fact, continued on principle by all of those artists, as if it were a matter of course, beyond the peristyle up into the vault; and there are many who will still consider themselves entitled to hold, not only that this must have been WREN's own intention (*quantum valeat*), but that it is the only correct basis of treatment, and the one that would certainly have been adopted by those whom Mr. CAVENDISH BENTINCK so affectionately calls "the old masters."

Mr. STANNUS presents to us the design of STEVENS upon this principle; and no doubt a truly heroic and most majestic scheme it is. Powerful Michel-Angelesque groups of herculean figures in the nude are piled one upon another in great pillars of awful life, unique and indescribable—except by the deprecatory term *acrobatic*, which is freely, although still respectfully, applied to them. Between these mighty ribs great circular medallions are occupied by other groups equally imposing. The *ensemble*, even if it could be duly appreciated from the gallery only instead of the floor, would unquestionably be most grand. But the detail is objected to; the whole affair is too palpably Pagan; and perhaps no more need be said. Mr. STANNUS therefore submits a modification of his own. The acrobatic ribs are abandoned; and the circular medallion picture-panels are left, with only such quasi-architectural features added as are requisite to fill up the composition; and this is the ultimate proposal for panel-decoration.

In opposition to this, *toto celo*, Mr. STATHAM, on what may be called philosophical radical grounds, led a good majority of speakers in the demand that the dome surface should be in one way or another treated as "the vault of heaven." Whether in white upon gold, in gold upon blue, in light colours upon dark, or in dark upon light, let the great unbroken expanse, they said, be filled with a heavenly host of some sort, in irregular whirls, in calm hierarchic zones, or in whatever other form of dim, apocalyptic vision, so that the spectator, gazing up from the distant terrestrial floor, may see heaven opened, and the infinite revealed to him in such suggestive form and ceremony as a painter's fancy of the noblest may be able to



portray. The critical principle here involved seems to be that the whole domical surface may be made a single quasi-realistic picture, architectural imitations wholly excluded, and subdivision, except by figure-grouping in indeterminate space, quite overruled. This is obviously the *ne plus ultra* of what we have classified as vault-work. No one would wish to deny the soundness of the principle; and even if criticism more especially architectural were to assert the artistic necessity, firstly, for *not* disguising the constructive form of the surface, and secondly, for conventionalising the figure-work so as to make it architecturalesque, yet still the doctrine of the single picture might none the less earnestly be defended, and its realisation imperatively demanded in some glorious work of the pencil, as a project worthy of our most advanced ideas of decorative skill.

The Institute meeting, as we have said, came to no vote upon the subject, but left the proposals as a whole in a state of confusion, which had been increasing during the whole course of the debate, and might have gone on increasing still if the controversy had not at the appointed hour run down. How the problem is to be eventually solved seems to be more doubtful than ever. There is so very much to be said on all sides, and apparently on any number of sides, and the British public are so little qualified to decide, that probably Mr. CAVENDISH BENTINCK is right after all when, as a somewhat Philistine member of the Decoration Committee, he told the meeting that, having with difficulty succeeded in defeating the portentous iconological project of BURGESS, the best thing they could do now would be to let the whole matter lie over *sine die*. One thing at least was wanting at the meeting—the presence of Mr. BERESFORD-HOPE.

#### WINTER EXHIBITIONS.—THE OIL INSTITUTE.

THE Institute of Painters in Oil Colours opened last week its second exhibition, and taxed the interest and the endurance of critics and picture fanciers with the inspection of nearly nine hundred canvases. On the whole the collection may be pronounced more satisfactory than last year, although some important exhibitors are absent or unfavourably present. The value of this alarming multitude of works lies really behind the foremost ranks, for the satisfaction to be derived from second-rate or mere market produce from the hands of men who are or will be within the Academy, or who have achieved a high distinctive position, is scant and pleasureless compared to the interest excited by the promise of young or original new-comers. On the whole one would rather not have to mark that the contributions of Mr. F. GOODALL, R.A., show a failure in his precise handling and luminous tone, or to say that the style of Mr. LINTON's single figures does not compensate for their lack of vitality, or that Mr. STOREY's art savours of the ceramic gallery, and that the less we see of Mr. MACWHIRTER in his present mood the better. And so on and so on: "the more's the pity," because this kind of thing need not be. There is, unfortunately, a tendency in the management of free and open exhibitions to grasp at the attraction lent by the presence of popular names in the catalogue, and men of repute are tempted to send in slight studies or mere pot-boilers to add supposed distinction to the walls at the cost of their own dignity. The onus lies partly on the gaping ignorance of the average public, but only in part. If artists would judge themselves and one another more severely in this matter, they could educate the public not a little.

The Institute publishes a catalogue with illustrations that serve as useful notes. Mr. LANGLEY prints a sketch of the old man in his powerful picture of *Cork Cutting*, a study in *chiaroscuro* strong, but without that mystic witchery which REMBRANDT drew from subjects no whit less homely. One of the cleverest figure subjects is not illustrated, *A Moor's Shop*, by SOLOMON SOLOMON, wherein the figure of the Oriental merchant squatted amid the multifarious artistic wares of his stall, is cunningly cast half into shadow half into light. Mr. SOLOMON has showed himself a student of luminous effect on somewhat eccentric lines within this gallery and at Burlington House. The present picture affects no singularity, but shows assured command of means and a keen observation of the laws of light. Mr. WATERHOUSE's *Byway in Ancient Rome* groups women in antique costumes of saffron and red robe and filleted hair within a shadowed Roman street, with a picturesqueness and force to draw comment were the artist other than himself; but it is an homage to the painter of *The*

*Oracle* in the last Academy to perceive in this picture a mere stopgap, and unwonted carelessness in sundry details of perspective and other truth.

The school of domestic sentiment finds plenty of apt exponents in the gallery. Mr. KILBURN is always pleasing within this limited range; and a new-comer, Mr. ARTHUR HACKER, makes a mark. The *genre* of history falls to Mr. STANILAND, and Mr. SEYMOUR LUCAS, who sends an effective incident in *The Elopement* of a cavalier gallant and lady of the "Restoration" type, now arresting flight for rest and food in a wayside inn, where the obsequious landlord seems to recognise in the befeathered and becloaked lover, CHARLES REX himself, or at least the braggart BUCKINGHAM. The extremes of interpretation of rustic life may be contrasted in the dainty affectations of Mr. CALDECOTT's miniature groups of last-century village life, savouring of CRABBE's *Tales of the Hall*, and the downright naturalism of Mr. CLAUSEN, who studies the coarsened face of *A Woman of the Fields*, and all the havoc that weather and privation and hard labour have worked there, in nature's red and white, with a literal copyism that becomes revolting in spite of the painter's mastery. To turn from such unflinching approach to common nature and contemplate the attempts of Mr. STOCK to embody pictorially the intangible subjects of poetic mysticism, or the essays of Mr. WALTER CRANE to portray, with an ingenious surrender of actual truth, his mediæval fancies, gives one the feeling of standing on one's head, so sudden is the transition. Mr. CRANE's *Belle Dame sans Merci* would work effectively into tapestry, especially if he would condescend to supply the knight with a body inside his armour, and set him in more manly guise upon his steed. The prettiest invention and most artistic work bestowed upon fanciful subjects is, to our thinking, found in Mr. JOHN SCOTT's *The Fairy's Messengers*, a charming faëry idyll, where amid the glinting green lights of a woodland nook the girlish elf, lying in long grass, issues her commands to a row of rabbits standing up on their haunches in various attitudes of attention. One of GRIMM's wonder-stories could not be more deliciously on the borders of the real-unreal.

Genteel comedy was always at home in the Water-colour Institute, out of which grew this association of oil-painters. The neatest hit is made by Mr. F. BARNARD in touching off an antique buck of the old school, with a nose like the Iron Duke's, ordering his dinner within a cosy pen at a chop-house, and disgusted to hear from the attendant Ganymede that "Ducklings and green peas is off." The matter is naught, but the manner inimitably racy. Among portrait heads, and there are many good studies, a bust length of a girl in a crimson hat and dress by JOHN PARKER, is admirable for colour and fresh broad handling; while a little sketch profile *Portrait* of a man in a slouching hat, little more than a rubbing in, has such *chic* about it, that we ask what next will the painter, C. K. MCCAUSLAND, do.

The amount of good landscape proper in the gallery is not much, while of landscape *genre* there abound evidences of thoughtful and artistic promise. The names of HENRY MOORE, and W. L. WYLLIE, and HAMILTON MACALUM, need no puff as sea-scaphists. We have, however, seen Mr. MOORE to better advantage than in this *Midsummer Sea*, which somehow looks less like ocean in an oily calm than some unknown chemical fluid working up into strange currents of motion. Mr. TOM LLOYD sends a capital crisp study of *Fisher Boys*, grouped in boats and over the clay-coloured rocks about a little creek, and Mr. NAPIER HENRY's *Hauling Crab Pots* is strong and brilliant. For quiet English landscape, with and without figures, we have noted new and known names: EDWIN BALE, LINNIE WATTS, Messrs. F. WALTON, J. PARSONS, R. MACBETH. In landscape *genre*—a moonlight effect—*The Trysting Place*, by W. H. HUMPHRIS, is noticeable. There are bright "impressions" of pastoral figures and landscape by Messrs. STOTT and CAFFIERI; also comment-worthy pictures from Italy by POWNALL WILLIAMS (abominably "skied"), M. R. CORBETT, and E. R. HUGHES; of which triad in manner the first is showy and radiant, the second delicate, luminous, and faithful, the third laborious, heavy, but faithful also in a curiously attained truth of line and relation of colour. Mr. E. BENSON would make a fourth in this group. Finally, let us award a line of recognition to flower painting in the hands of Mrs. CECIL LAWSON and Miss L. PARSONS, who have a right sense of arrangement in their groups of harmoniously-coloured blossom and leaf.



## OLD LONDON.\*

IF in a few words we had to describe the portfolio of etchings which Mr. ERNEST GEORGE has completed, we should say that the collection appears to be the record of a search after light and shade in London. Thanks to official regulations and other causes street architecture is characterised by flatness of surface, and it is almost a risk for an architect to introduce projections unless they are to be measured by inches. If he tries to evade the Metropolitan Building Act he is supposed to sacrifice his clients' interest, for as every inch of ground is valuable, the most prudent course is to bring the largest possible area under a roof. Hence it follows that buildings in which impressive effects of light and shade are apparent must become more rare in London. An artist who has a desire to feast his eyes with the delight of *chiaro oscuro* must seek for it in the byways. Before long it will not be found in those places, for the spirit of improvement has an aversion to shadows, or in other words to features which, producing shadows, are suggestive of individuality in the builders or the owners of houses.

It must, however, be admitted that there is no quality in an architectural work which is so little recognised by the public as that which results in the play of light and shade. Few people, it has been said, pay any attention to the transformation which is constantly going on in the cloud scenery that is visible everywhere, or have any knowledge of atmospheric effects. The Roman poet long ago remarked how the thousand colours which gild the day neutralise one another, and, to an ordinary spectator, Nature's palette appears rather limited. In the same way it needs a sort of education to enable the majority of people to recognise the importance of shadow, not only in adding beauty to forms, but in expressing them. This is true especially in architecture, and we may be certain that a great many of the so-called improvements would never have been carried out in old buildings, if the projectors could have foreseen how much was to be lost by the removal of things which created shadows. What, after all, is the picturesque but that quality in an object, no matter whether it is a mountain, a Mediaeval cathedral, or a shaggy goat, which affords opportunities for contrasting lights and shades? In our modern desire for uniformity we overlook these facts, and, in course of time, we become almost incredible of their existence. People have grown so familiar with monotony in London that to many of them the etchings of Mr. GEORGE will be a surprise, if not a revelation. Some may even say that the views are imaginative; and as the recognition of the picturesque needs something more than seeing with one's eyes, we should not be surprised to find it said that the etchings will not bear to be compared with the originals. The immortal PETER BELL spent his days and nights amidst the finest scenery in the kingdom; but he was proof against the witchery of nature, and to the end of his life the yellow primrose was to him the yellow primrose, and nothing more. In the same way, keen-eyed, matter-of-fact men might take a short cut every day through Probert's Place from Regent Street, or through Crown Court from Pall Mall, or drive through Wych Street to the Law Courts, without perceiving any of the effects which Mr. GEORGE has expressed. As COLERIDGE says, "We receive but what we give," and an artist's eye will always create something beautiful out of the most sordid scene.

The first etching shows the house of Sir PAUL PINDAR, which no longer exists, in Bishopsgate Street. The great projecting windows, with the middle parts far in advance of the sides, give Mr. GEORGE a good opportunity to show his skill. It has been often drawn and engraved, but this is the first plate that does justice to the window. In the next plate we have Wych Street, with a glimpse of the tower of St. Clement Danes. It is enough to drive a district surveyor to distraction to see such a variety of planes in the storeys of the houses, and a zealous officer must often wish that he could summon the builders of a past age for their want of foresight about the clauses of the Act of 1855. It is no wonder that several of the houses have been lately removed. The third view takes us to the Harbour Master, at Limehouse, one of those riverside public-houses that seem to have been made up from time to time of waifs and strays of timber, and of which as many rooms as possible are built over the Thames. No more characteristic

structures exist for an amphibious population, and the piles, posts, steps, hoarding, masts, flagstuffs, &c., have a fascination for painters. Then we have Foubert's Place, which becomes more strange from its contrast with the adjoining Regent Street. Here the view is taken so as to show the corner with the newsagent's and haircutter's shops. Everything has a tumble-down character, but somehow the buildings endure, and to a few passers-by they give as much pleasure as the stuccoed elegance which is near them. There are many Londoners who do not know either Foubert's Place or Crown Court. The latter leads from Pall Mall to King Street, and the entrance is opposite Marlborough House. It is not picturesque, and must have been difficult to treat. We did not think so much could be made of the place as is done by lighting the upper part of one side, and throwing the remainder into shadow.

There is higher architectural character about the subject of the sixth plate—St. Giles, Cripplegate. But Mr. GEORGE appears to have been more attracted by the houses which almost enclose the church, and has introduced the overhanging windows very effectively. In spite of all the trade which is seated thereabouts, Cripplegate is one of the quietest parts of the City, and is the more interesting as some of the work represents the time before the Great Fire. This plate is followed by another bit from the City—a corner of St. Bartholomew's, Smithfield, and, if we remember rightly, one of the houses shown encroaches on the church itself. A second river scene is derived from the timbers of Battersea Bridge. The sketch was taken when the tide was very high, and shows one of the cutwaters in the foreground, on which the light falls, leaving the superstructure of the bridge in shadow. St. John's Gate, which we next meet, is a sparkling etching. The fine old gate is well contrasted with a shored-up house and other frail tenements. Then comes another bit from the river, the subject being some of the stores between the Houses of Parliament and Horseferry Road.

A few houses are given from that part of the busy Aldgate where the butchers most do congregate. The manner in which Mr. GEORGE regards London will be derived from his description:—"The etching," he writes, "shows a group of butchers' shops that stretch out into the wide street; behind them are the shambles, and in the dim recesses beneath the old houses there is the charm of shadow, colour, mystery, and movement. The high boots and blouses give a distinctive character to the men of this unsavoury quarter. A continuation of Aldgate is the Mile End Road, a broad thoroughfare much given over to taverns, one interesting specimen being placed really in the middle of the road, and dividing the traffic; benches and tables are generally set out on the wide pavement, and at night, with the flaring lamps, groups remind one of Ostade and Teniers."

A view of Temple Bar, which was taken in 1877, with St. Dunstan's tower and Fleet Street beyond, is a good memorial of that structure. Another record of a demolition is the etching of the Oxford Arms in Warwick Lane, in which we have one of those houses that so well suit Mr. GEORGE's style. Different in character is the bit from the Tower of London, which has been sketched from the river. The boats, trees, steps, walls, the middle tower, and the "wooden shanties which have grown about the severe stone walls to increase the comfort of the warder," form a pleasing scene that is anything but suggestive of the grim fortification. The Old George public-house on Tower Hill is a fit accompaniment to the Tower scene, and after it comes another river-side public-house and sheds. London Bridge is hardly the subject that one would expect Mr. GEORGE to undertake. He has treated it in an original manner, the view being taken from the landing-stage on the Surrey side. The projecting buttresses and cutwaters are emphasised, and lead to the offices on the Middlesex side, with St. Magnus Church and the Monument.

Mr. GEORGE then turns westward, and gives a view of Staples Inn, which, in spite of some modern features, retains its attractiveness. Oxford Market, sketched in 1880, with its Tuscan columns and high roof, was an interesting example of eighteenth-century work, but it was not a profitable enterprise, and has been removed. Lastly comes what is probably the best bit in Drury Lane, that is, the old houses at the south end, with Drury Court and the church of St. Mary-le-Strand.

Throughout the twenty etchings which form the series, we have excellent work. As we have said at starting, Mr. GEORGE appears to be more eager to express effects of light and shade

\* *Etchings of Old London.* By Ernest George. With Descriptive Letter-press by the Author. Published by the Fine Art Society.



than details. He endeavours to suggest the mass of a building without loitering over any one part. Apparently, the etchings have been executed in the simplest manner, that is by bold strokes, which generally run in one way, and with as little outline as possible. But if a student tries to copy a plate in pen-and-ink, he will find that those simple lines mean more than he supposed, and that they must be the result of a masterly hand, directed by a clear idea of what is to be represented. Apart from their beauty, the etchings as studies of light and shade will be found invaluable. There is none of that patchiness which is sometimes seen in black and white. The shadows of the parts all coalesce in a whole, and both unity and repose are secured. It is a mystery how so great a quantity of work of this class can be produced in the leisure that is at the disposal of a busy architect. But as Mr. GEORGE apparently has an inexhaustible amount of time, we hope that he will give us many more plates of what may remain of Old London. The etchings are dedicated by Mr. GEORGE to Mr. PERO, his partner, as "One who is in hearty sympathy with the old world, a lover of Old London, and who shares with the author the pleasures and responsibilities of slightly influencing the London of the future."

#### AWARDS TO VENTILATORS.

THE disappointment that has arisen in connection with the latest attempt to prove the relative value of ventilating cowls, by means of so-called scientific tests, is an illustration of the correctness of the opinions expressed by us in the article on "Cowl Testing," which appeared in *The Architect* of the 1st ultimo.

It would appear from the description given of the *modus operandi*, by those who witnessed the proceedings, that the arrangements were of such a nature as to be almost incredible. It is not our object here to describe or criticise these arrangements, as this has been already fully done through our correspondence columns. What we wish to draw attention to is the great injury which is likely to be inflicted on the cause of sanitary science by proceedings of the character of those in question, as they undoubtedly do more to nullify the endeavours which are being made to force the importance of ventilation on the public, than anything else that could well be imagined. To secure public confidence it is necessary that personages assuming the position of teachers, or instructors, should show that they are qualified and competent to fulfil the duties of their office. They must next demonstrate, by their treatment of the matter entrusted to them, that they fully grasp the nature of it, and that their mode of dealing with it is the correct one, and in accordance with the rules which govern it. They must also show, by the result of their labours, that they have really achieved what they have been striving after, and prove the correctness and value of those results to the satisfaction of an intelligent community. All these are essential before a favourable impression can be made, or that confidence inspired which facilitates the adoption of any reform.

Now let us see how this applies to the bodies who have taken upon themselves to be authorities, judges, teachers, or whatever they may choose to call themselves, in the great cause of sanitary reform. We are forced to confess that the retrospect is by no means encouraging; indeed, it is so much the reverse as to be absolutely disheartening.

Let us take the proceedings of the Sanitary Institute of Great Britain as an instance. The Institution was formed a few years ago by a number of sanitary engineers and doctors, for the purpose evidently of affording them an opportunity of declaiming at large on the special merits and virtues of their own particular schemes and nostrums, and the general advancement of their own hobbies. One of the best known acts of this body is what is now termed the "Kew farce," the details of which are too familiar to require repeating here. We have, however, only got to do with showing the injury which is inflicted on sanitary science by all such proceedings.

The first effect of the publication of the results of these experiments was an immediate and considerable falling-off in the sale of ventilating appliances. We have certain information on this head. If this lack of demand for, and disbelief in, ventilating appliances had continued for any length of time, which fortunately it did not, an incalculable amount of mischief would

have resulted, by discouraging and driving out of the field the large number of practical men who had devoted their time and talent to devising improved forms of ventilation, and bringing them before the public. It would also have nipped in the bud any new ideas which might have been developing, and have stopped inventors from continuing their labours in this direction, when it was evident that there would be no demand for their productions. In the second place, sanitary science, so far at least as ventilation was concerned, would have been checked and brought to a standstill. We should have been practically in the position of our ancestors, for whom a simple opening through the roof was all that was provided for ventilation. Yet this is the device which the Kew experts have recommended as being greatly superior to any scientific arrangement that could be employed. Such a misunderstanding of the subject could not be surpassed. It showed that the experimentalists were unaware of the efforts which had been made by scientists during the past and present centuries to devise effective means of ventilation, and the results of whose labours and experiments have always been before the public in the form of scores of books. Now if a simple open pipe had been found to really answer the purpose, what was the use of all the labour and talent which had been expended in the production of improved ventilators?

However, this is a point we need not discuss here. Every one is aware of the true value of an open pipe when employed for purposes of ventilation, and we merely draw attention to it to show the inexperience that may exist amongst men who profess to be qualified authorities.

The *Times* took the matter up and exposed the absurdity of the results, reading a severe lesson to the Sanitary Institute. Other journals followed, and the worthlessness of the tests were so conclusively shown that public confidence in ventilating appliances was gradually restored, but the cause of sanitary science received a blow from which it has not yet recovered.

It is understood that the Sanitary Institute is again, after a lapse of fully six years, conducting experiments; but it is to be feared that, when they are completed and the results made public, they will only go to increase the injury which has been done by the first attempt. But whatever may be the result, it cannot be more injurious than the "testing" at the late Health Exhibition, which has already become a subject for derision.

It is beyond comprehension to find so much time and money expended in order to show that of a few articles experimented upon one is found to answer better within a room than the other. As we have already endeavoured to explain, all cowls do not act alike in certain situations or in certain seasons of the year. Because the situation and season in which the cowls are tested happens to suit one better than its rivals, that cowl should not be proclaimed to the world as the best until it has been tried under different circumstances. This suitability to one set of conditions is a common experience. Mr. G. W. Webb, architect, whose letter appeared among the correspondence on November 15, expresses the view very fairly. "It is well known," he writes, "that many ventilators will not act properly when exposed to an open air test such as I have suggested; fog, rain, and dense atmosphere being so prevalent in this country; that unless a ventilator will act during all atmospheric changes of the weather, it is practically useless, and I fully expected that a most exhaustive trial would have taken place to thoroughly test the respective merits of the various ventilators exhibited."

Unless the tests were of a kind that could not be impugned, it is unwise for a jury to interfere with the business of any class of manufacturers. Trade has a marvellous way of adjusting itself. The best ventilator will readily demonstrate its superiority without extraneous aid. The public are sufficiently alive to their own interests to know when a thing suits them, and answers its purpose, and when it does not. The best cowl will have the largest sale, and the worst the smallest. It may be relied upon that the cowl for which there is the largest demand, and which has been shown to be successful under the most trying and varied conditions, will be found to be the best cowl.

If such experiments as those under review were to be accepted as conclusive, an unprofitable cowl knocked together by some tin-smith might happen to suit the peculiar conditions of Moreton Gardens, and be declared the victor over the heads of cowls that had been years before the public, thoroughly tested and proved to be good, and in favour of which the highest testimony was fur-



nished. It would be absurd to suppose that such an experiment is to be accepted as nullifying all the successes which may have been achieved by the other cowl in actual practice.

It is an instructive lesson to compare the different tables of results published by experimentalists. It will be found that, as a correspondent said last week, in no two cases do they agree, one table showing the ventilator as acting entirely contrary to what is recorded in another table. The important question therefore arises—How do the Sanitary Institute propose to prove that the table of results they may publish is the only correct one, and that all the others, including those of the Kew and the Health Exhibition tests, are wrong?

A good deal has been said about awards to ventilators and how they should be granted. There is no difference between a ventilator and any other piece of machinery or article shown at an exhibition. Then, why should it be judged differently? We suppose juries give their awards because they are satisfied from what they see that the article is a meritorious one, on the evidence that is submitted to them in proof of its efficiency. This is the usual mode of proceeding at all important exhibitions; and why should an award given under these circumstances to a ventilator not be as fair as in the case of other articles, if the exhibitor can satisfy the jury that the arrangement of his cowl is superior to others, and can prove by the strongest testimony that it is more extensively and successfully used than others?

Right nowadays in this country at last triumphs over might, and time tests all things, and it may safely be accepted as correct that the ventilator which constantly proves itself to be efficient wherever used, and which successfully stands the test of time, is certain to be a good and reliable one, and all the experiments in the world, whether showing in favour of or against it, would not alter its action or make it better or worse.

## ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE third ordinary meeting of the Institute was held on Monday evening, Mr. Ewan Christian, president, in the chair.

The PRESIDENT said it was the intention of the Council on February 2 to nominate a gentleman to receive the Royal Gold Medal, and that any members desirous of making any suggestion should write to the secretary on or before the last day of the month. Letters were then read from Mr. Woodthorpe and Mr. Crace expressing regret at their inability to attend that evening. Mr. Crace wrote that in his opinion the internal decoration should be strictly in accord with the dignity of the building, and the keynote of his arrangement would be simplicity. He agreed with Mr. Armitage that it should be a grand design, clearly defined, and almost flat, with slight shadows.

The discussion on "The Internal Treatment of Cupolas in General, and that of St. Paul's in Particular," adjourned from the last meeting, was resumed. The members who took part in the discussion having for the most part committed their remarks to paper, read them to the meeting from their manuscripts.

### The Internal Treatment of Cupolas.

Mr. G. AITCHISON opened the discussion. As regarded the decoration, nothing, he said, would be more disastrous than postponing the work. Our public buildings were crying in vain for completion by sculpture and painting, and if the work were now indefinitely postponed until the best of all possible designs could be got, a blow would be given to decoration from which it might never recover. Who could say that we might not become involved in a great war?—and the adornment of our great public buildings might be postponed for a century, and possibly for ever. Whatever might be said of the late Alfred Stevens's design, it was undoubtedly the design of a man of genius. Owing to objections on the part of the Committee to certain portions of this design, Mr. Poynter was asked to make certain modifications of it, and this modified design was now to be seen *in situ*. Sir Frederick Leighton, as a tribute to the memory of Stevens, undertook to make the cartoons for the large circles, at a cost that would involve him in heavy pecuniary loss for a series of years. When the country had been enabled to secure the services of such eminent men for a nominal sum it did appear to be the very height of madness to reject the offer, for it should be clearly understood that this almost gratuitous tribute to Stevens's memory could not be had if some other design than that of Stevens were substituted. Some wiseacre suggested that our public buildings should not be decorated till we could secure the services of an English Titian, which reminded one of the Greek who swore that he would never go into the water till he had learned to swim. The triumphs of Titian, Tintoretto, Paul Veronese, Correggio, Raphael, and Michael Angelo were due to the antecedent century when decoration was applied to every public building, and by this means a school was

formed from which these transcendent geniuses were evolved, and we should be putting a stop to further excellence in mural decoration if we rejected the work of the greatest extinct genius this century had produced in England, carried out as it would be by two of the ablest painters of the day. Mr. Aitchison said he might add that if Stevens's design was to be rejected and a fresh design made, in common courtesy Mr. Poynter and Sir Frederick Leighton should first be asked to give their own views of what would be appropriate, and the committee must be prepared to pay the current price for the design and the subsequent cartoons.

Mr. FRAMPTON thought a simple grid treatment, in relief, with panels—if any, egg-shaped panels—and with fresco decoration, would not be objectionable; but he favoured representing the dome as an aerial vault in imitation of the grand azure vault of the heavens, having as its basis a blue background with white figures. Figures he would not set between vertical ribs or between horizontal zones. A gold background, with or without figures, would not be effective. The gold treatment would be out of place in the cathedral, though the use of gold was very suitable to give effect in secular buildings.

Mr. EMERSON said he agreed with Mr. Aitchison, who expressed his dislike for postponing the work. Mr. Stannus had laid down a rule that the decoration should articulate with the subjacent architecture, and yet from what he said later on in regard of the ribs, Mr. Stannus did not seem to hold the rule in favour, but to be arguing for Stevens's design, or rather his modification of that design, against his conviction. Mr. Emerson expressed himself in favour of zonal treatment, after pointing out that only three or four examples could be adduced as precedent for Mr. Stannus's rule out of twenty-six domes of importance that were decorated interiorly.

Mr. ARMITAGE said that as a painter he much preferred the new design to those cut up either by vertical ribs or circular panels. In Wilde's design the painter had fair play. Groups and figures, whether good or bad, would be seen, and not smothered as Mr. Poynter's was by very questionable architectural details. As to Mr. Poynter and Sir F. Leighton, his only regret was that such good work was, owing to the circumstances, so thrown away. If fair play had been given to Mr. Poynter—that was, spaces of ample size, semicircles that would cover a quarter of the dome—his beautiful drawing, colour, and other excellencies would have been appreciated. He not only objected that it was not properly seen, but that it was distorted. Michael Angelo he admired as a draughtsman of immense power, but the cramped figures of the Sistine Chapel struck him as a display of barbaric power. The distorted figures of Michael Angelo were totally out of place in the dome of a Christian temple, where ample space must be allowed the painter to freely develop his groups; otherwise, to accommodate himself to the space at his disposal, he must adopt acrobatic positions for his figures. It might occur that at times the dome would be brilliantly lighted—as by electricity; but even then boldly treated groups and masses would look better than any rib arrangement. Painted architecture killed figure-work, and in spite of Michael Angelo's authority, there seemed a want of reverence in making angels and saints do duty as caryatides to carry up architectural features in the dome.

Mr. RALPH NEVILL said he thought the discussion was hardly intended to turn on picking holes or making comparisons on different persons' designs, but it was open to discuss the main principles of the decoration. He asked whether gold mosaic or the figure subjects upon it was to be regarded as the most valuable, and ventured to say that the gold was the important part of the work, figures and colours to be used rather as a framework for the gold mosaic. In St. Paul's neither figures nor colour would ever show much. Even gold mosaic would show but little except where the light fell on it. Early examples showed that colour was used very sparingly on the gold. White was used, and more than half of the colour put on was white. The early painters, Orcagna and Giotto among them, used, and only used, small quantities of colour to accentuate the white. The rib treatment he considered a false mode of cutting up a dome. They were never found in Byzantine work, and domes belonged to the Byzantine style. The only reason ribs, &c., were introduced was, he believed, because it was rather a serious matter for a painter to make a design for the whole, when they could escape that trouble by splitting up their dome by ribs and circles. He was pleased to hear previous speakers connect the idea of the dome being suggestive, and made expressive of the vault of heaven. Our idea of a fine day was a blue sky, with a white cloud or two. We did not imagine many clouds of various colours. Mr. Nevill also remarked that any zonal treatment should run round the bottom of the dome, the upper part being left free.

Mr. WOODWARD said that the cartoons in St. Paul's might be carried out without further notice, and the cathedral spoiled before they knew anything about it. He condemned what he had seen there as utterly destructive of scale, and as bringing down the concavity of the dome. Mr. Stannus's scheme was, he thought, the more defective design, being work common to every decorator's shop and school of art in the country. [While Mr. Woodward was speaking, Mr. Stannus, followed by Mr. Penrose, rose to protest.] Mr. Woodward said that the designs had certainly been put in the



cathedral to be criticised. The proper treatment, he thought, would be to cover Sir James Thornhill's work with several coats of paint, and then distemper it. This would enable them thoroughly to realise the beauty of the dome.

Mr. G. A. AUDSLEY said that an improper treatment of St. Paul's would be little short of a national calamity, and he protested against any scheme that involved ribs, panels, or vertical forms of whatever kind. He agreed with Mr. Statham's remarks made at the previous meeting, and considered they had nothing further to do with verticality above the cornice line of the peristyle. Existing examples of the vertical treatment tended only to satisfy him that, from every point of view, to adopt it at St. Paul's would be a grave mistake. Where it had been used he thought its use had always been more or less originally contemplated by the architect. Here they had the vertical broken by Wren with the unbroken horizontal line of the entablature. The vertical was completed, the horizontal defined, and a zonal treatment should crown the whole with appropriate mystery. Mr. Audsley disapproved of the eightfold division of the dome and introduction of colossal figures, and compared the effect to that of a carpet pattern badly designed in large squares. The visitor's eye was caught at once, and after he had counted the squares in the pattern the carpet had no further interest for him. Mr. Audsley then stated what he considered would be the proper treatment, as follows:—1. That the internal surface of the dome, circular in plan, must not have a vertical, divided treatment. 2. That the surface of the circular dome, being uniform and unbroken, must not have any decoration calculated to interfere with it. 3. That if the surface of a circular dome must be divided by decoration applied to it, that division must be zonal in character. 4. That the zonal treatment must not be of so pronounced a character as to call special attention to the lines of the division. 5. That the subject of the decoration must admit of the introduction of a great number of details of moderate size, so that the dome may be increased in appearance to the eye of the observer. 6. That the subject must form one grand composition, rather than be disconnected and isolated in its constituent parts. 7. That the subject must be one which, transferred to the domical surface, will not strain the eye of the observer nor strike him with absurdity. And lastly, that the subject should be one in which a certain mysterious and supernatural character prevails, and which should call forth the highest powers of the imagination. Mr. Audsley, in regard of the subject matter for the decoration, said it might be the glory of heaven immediately following the last judgment, the Judge having descended with His hosts of angels, earth having given up her dead, the good and bad parted—the latter hurled into the bottomless pit, the just gathered together by the angels having followed their Saviour into heaven. Christ depicted on the throne of heaven, the choir of seraphim in the first zone nearest the crowning, and the various other angelic hierarchies in the different zones, below which the blessed, and the lowest zone of all would be the link between heaven and earth. This would provide ample scope for the artist, and give him a large field for the display of the finest colouring.

Mr. BLAGROVE agreed with the opinion that dividing the dome up would detract from its size. Coffered treatment, he suggested, would be the most proper, as the vertical lines or ribs advocated by Mr. Crace would be obtained, and the horizontal lines recommended by Mr. Seddon would be preserved. He did not mean plaster or pictorial coffers, but a flat-coloured decoration by which the architecture would be emphasised.

Mr. J. D. MATHEWS recommended that the dome should be dealt with as a vault, and suggested it should be cut into three horizontal divisions, to represent earth, sky, and heaven.

Mr. W. WHITE spoke of blue as effective in producing distance: gold or yellow brought the distance near to the observer. It was not a question of sentiment, but one entirely of fact, and for many reasons it was true that the dome should have blue for a background; but, considering how dark the dome was, blue unless very pale would become black. What would give distance would also give dimension, and, while colossal figures would be entirely out of place, it would be impossible to put merely life-sized figures if they were to have any effect whatever. The figures would be somewhat larger than life, the gradation in size to range in accordance with the height.

Mr. DAWSON thought there was an illusion in trying to picture to themselves the dome as the vault of heaven. How could the peristyle of St. Paul's support the vault of heaven? He did not think the cathedral would be benefited by putting an immeasurable vault on it, but they should rather put one which would be suggestive of a dome of the same diameter as the peristyle, without putting anything to bring it down or detract from its scale. There should be no vertical lines, but they might have a free treatment in zones.

The Hon. CAVENDISH BENTINCK, alluding to the fact of his being the only member of the St. Paul's Committee present at the meeting, said he was asked some years ago by Sir William Tite, then advanced in years, to become a member of the Committee, and assist him in his labours on that Committee, and be his representative. He (Mr. Bentinck) was one of four out of the Committee who prevented the destruction of St. Paul's by Burges. Mr.

Bentinck said he had a great respect for the old masters, and valued work according as it approached or receded from the standard of the old masters. He had a great admiration for Wren, and thought they should do the best they could to preserve the work of the genius they all so much admired. No one, moreover, had a greater admiration for Stevens than he had. He had assisted Stevens to the utmost of his power in regard of the monument of the Duke of Wellington. For years he had fought his battles, and when others derided Stevens he had always had confidence in him, and maintained that his country would have reason to be proud of him. With all his respect for Stevens, he did not approve of his design for the dome of St. Paul's. It receded from his ideas of the old masters' works, because it would break up the dome too much and give it a fragmentary appearance. His opinion was that the dome should have a broad and free treatment. The church of the Madalena, at Venice, was a good example of a coffered dome, but he would not recommend that treatment for St. Paul's. He was in favour of pictorial treatment on a large, grand, and striking scale—the pictures to be plainly visible from the pavement below. It was far from his intention to depreciate the works either of Mr. Poynter or Sir F. Leighton, but he imagined most of them would think it undesirable to proceed further in that direction. None of the designs hitherto made appeared to him satisfactory, and he thought they should pause before destroying Thornhill's work. He would advise them, in fact, to wait for some time, and leave St. Paul's alone until some great artist or master mind should arise.

Mr. BRYDEN expressed himself in the main in favour of Stevens's design, but objected to features in the later design and Mr. Stannus's designs. The circles were a mistake, and Mr. Stannus had owned to the introduction of ribs to counteract their restlessness, and the ribs contracted the dome in apparent size. He suggested the retention of Thornhill's subjects, but that their architectural accessories should be replaced by better work. The dome should not be regarded as the vault of heaven, but should be treated as a hemispherical surface. If they were to deal with some of the smaller vaulted surfaces in St. Paul's before attempting the decoration of the cupola, they would gain experience and skill for solving the more difficult problem of the dome.

Mr. J. P. SEDDON said that he thought Mr. Stannus was to be congratulated that one at least of the many who differed from him as to the principles for the decoration of the dome of St. Paul's, had had the temerity "to write a book"—that is to say, to put on paper some realisation of his idea. The time since last meeting had been short for the purpose, but Messrs. Belham had kindly permitted their artist, Mr. H. Murray, whom he (Mr. Seddon) could claim as having been his pupil as to decorative art, to work out a scheme from his sketches and directions on the basis of the picture by Sandro Botticelli that he had referred to. Such as the drawing was, he left it, with deference for criticism, aware that it must be abundantly open to such. Nevertheless, he maintained that he felt confident that the principles upon which it was founded were the correct ones.

Mr. STANNUS said that most of the speakers had answered one another, and so had simplified his task in replying. The zonal treatment he had tried and abandoned, because it cut up the dome into a series of measurable littlenesses, and also appeared in perspective as a succession of little steps. The treatment was one suited for a semi-dome seen only from one aspect. He did not know where Mr. Audsley would find room in the dome to represent the saints and the numerous angelic hierarchies in successive tiers. Mr. Emerson had referred to a number of Oriental domes, but St. Paul's was an Occidental dome, and must be treated accordingly. He would recommend those who objected to the use of gold to study its effect in the church of St. Mark's at Venice. Alfred Stevens's design was, he considered, the most original and the best design yet brought forward.

## THE GAMBETTA MEMORIAL COMPETITION.

THE following is a translation of an article by M. Albert Wolff in the *Figaro*, which, as coming from so distinguished a critic, has secured much attention in Paris. It is an outspoken reproof of the fussiness which has been introduced into French sculpture in order to gratify politicians:—

The question of the monument to Gambetta presents two aspects. If I were asked which I prefer among the five premiated designs that have been exhibited in the Palais des Beaux-Arts, I should reply, without hesitation, "Not one;" but if I were asked whether the model of M. Aubé, sculptor, and M. Boileau fils, architects, has merited the first prize, I should also reply that the jury were right, because it is evidently the most interesting work. The misfortune in this affair is that we are ignorant of the way to do anything with measure and tact. On all sides one turns with an equal facility into exaggeration. Not more to-day than on the day of his funeral have I a wish to diminish the fame of Gambetta, whom I loved much. But if the former Dictator could behold the memorial of himself which has been designed and selected, I am sure that with his fine sense of the fitness of things, he would conclude that



the zeal of his friends had gone beyond discretion. The successful design is not so much a monument as a secular cathedral, a work of the most complicated and obtrusive character. If Gambetta had governed the Republic for twenty-five years, if in his reign and through him France had become greater than ever, if industry and commerce had attained by his efforts a common apotheosis, if, through his influence, arts and literature had been restored to the glory of 1830, if he had endowed the country with imperishable institutions, put everything in its proper place, and inaugurated definitely the reign of justice—if Gambetta had accumulated all the civil and military glories, such a monument would still surpass everything that one has seen among the people who wish to consecrate the memory of their benefactor in a public place.

Monumental sculpture is especially difficult, because it presents itself to our vision in a large space. Its principal duty is, therefore, to strike the eye by clear, definite forms, to retain us by contours simple yet powerful. At the first glance one should be able to measure the work, and to feel its force. The great defect of all the models exhibited at the Beaux-Arts is the want of unity in the conception. Not one presents itself clearly at first sight, all suffer alike from an accumulation of incidents in the life of Gambetta, or of allegories of his virtues. These trouble the spectator, and attract his attention at the same time to the top, the bottom, the front, and the back of the monument.

The six models of an apotheosis correspond in defects of conception. They alike bear witness to the lamentable tendency of modern sculpture to become, as it were, literary sculpture. Our sculptors are not content to make a figure of Gambetta. They also desire to give his biography. Behind him, at his feet, at the four angles, upon the summit, they relate anecdotes, and in such a way that Gambetta himself is overwhelmed by the accessories. Monumental sculpture destined for public places should, above all things, be simple; it should impress us by the grandeur of the lines, expressing clearly the statue in space. In no past era have the sculptors worked otherwise, because throughout the centuries their art rested on the same principle of simplicity. Here where it is wanting there is no longer a work of art worthy of the name, for not one of the monuments exhibited in the Palais des Beaux-Arts is in a condition to satisfy connoisseurs. All are so complicated in the invention that the eye runs from one part of a subject to another without finding complete satisfaction.

I wish to aid the friends of Gambetta, and therefore propose an example in the monument that Italy has erected to Cavour in Milan. It is impossible to produce a more grand effect with simpler means. There is nothing of the inquietude of the models exhibited in the Beaux-Arts. We have simply a Cavour. His life is epitomised in a figure of History, who with a burin records the name of the great statesman on her tablets. The artist has expressed himself in such a way that posterity will conserve the renown of Cavour, whose genius has created an Italy that is respected, strong and united. The impression is the more striking as the idea is so clearly expressed. The artist has not spoiled his work by the abuse of insignificant and useless details, such as Political Wisdom and Military Force, personified under allegorical figures of a diplomat or a *bersagliere* of Palestro. The incidents of the life of a great man could be represented only in bas-reliefs on the pedestal, which should never compete with the principal figure. Let any one look at the six models, and it will be admitted that they resemble the apotheosis in a spectacle or *flerie*, at the moment when the principal personage, surrounded by allegorical figures, ascends in a cloud.

The best design among them is that of M. Aubé and M. Boileau fils. The proportions of the architecture are elegant, and the sculpture very interesting. M. Aubé has exhibited at the last Salon a statue of Bailly, the astronomer and President of the National Assembly, which is destined for the Chamber of Deputies. He is only forty years old, which, in an art so difficult, is hardly the maturity of talent. His first notable reward is dated 1874, when he carried off a medal of the second class. M. Aubé is not a Chevalier of the Legion of Honour, and what pleases me still more, he is not a Prix de Rome. I do not say that for a sculptor it is useless to make a pilgrimage to Rome, but it is not altogether necessary to be immured for three years in the Villa Medici in order to have some talent and to develop it freely. The monument has the form of a pyramid elevated on a *socle*. Gambetta is shown in an impressive attitude. Behind him is a figure of *War*, which has been evidently inspired by the "Marseillaise" that Rude has sculptured on the Arc de Triomphe. Gambetta is surrounded with warriors who brandish their swords or collect those that have fallen from hands that are rigid in death. At the base the *socle* is flanked with colossal groups. On one side is *Force*, and on the other *Truth*. These figures are not enough. Upon the summit of the pyramid the sculptor has hoisted an allegorical figure of the *Revolution*. She is seated on a lion, holding in one hand the Rights of Man, and brandishing in the other the thunderbolt of Jupiter. M. Boileau shows a remarkable water-colour which suggests what this spectacular apotheosis will be like when complete. The two allegorical figures as well as the *Revolution* on the summit are to be in bronze, the remainder in marble. It will assuredly be a costly monument, but it will never be a beautiful monument in the sculptural sense.

To be just, however, we must say that the moment was hardly well chosen to begin this apotheosis. I do not wish to introduce politics in a simple question of art, or to inquire whether Gambetta merited so obtrusive a memorial. In my opinion, a simple figure of the tribune would have sufficed. It is possible that in course of time Gambetta might have attained one of the first places among the statesmen of the age, but he died so young that he had not the opportunity to take the exalted position that the sculptors have imagined. The moment was unwisely selected, because the death of Gambetta is still too recent; the models revive the emotions excited by the funeral, and our sculptors seem to have laboured for the friends of Gambetta rather than for futurity. I maintain that not one of those who have lived in intimacy with Gambetta at the moment of his triumph is more anxious to preserve a memorial of him than I am, who was his friend in his obscure beginning. What thwarts me in this extraordinary apotheosis is not the homage rendered to a spirit grandly endowed, but the disproportion between the life of the tribune and this monument, the like of which has not been seen in a former age.

It is remarkable that all the competitors fall into the same vagaries. M. Falguière has imagined a Gambetta as a tribune, which was perhaps the true idea to express in the memorial. A head of the orator, which the sculptor has placed at the side of his small model, is remarkable. But M. Falguière has, like others, spoiled his design by allegorical figures which represent *Patriotism*, *Eloquence*, and *Wisdom*, and struggle like maniacs about the pedestal. The project of MM. Coutan and Lambert resembles an epergne. M. Coutan was represented in the last Salon by two remarkable busts; he won the Prix de Rome in 1872, and four years afterwards was awarded the Première Médaille of the Salon.

The colossal *Atlas* exhibited by M. Injalbert in 1876 may be remembered. He also gained a Prix de Rome, and a first-class medal at the Universal Exhibition of 1878. In partnership with M. Laloux, the architect, he has invented a complicated apotheosis in which Gambetta has the appearance of a singer in an opera. Then there is the design of MM. Allar and Dutert. The sculptor is a distinguished man—a Prix de Rome, the recipient of many rewards, and his *Death of Alcestes* obtained the Médaille d'Honneur in 1878. His design is suggestive of a fountain. At the feet of Gambetta we see little soldiers defiling, which recalls one of Duprè's pictures, but the figures are without sculptural character.

A word must be said about the model by MM. Dalou and Faure-Dufarrier. Every one knows the position of the sculptor. He astonished the Salon of 1882, and the Médaille d'Honneur was voted to him with acclamation. M. Dalou is one of the forces of contemporary sculpture in France. But whether he was not convinced that Gambetta was an ideal politician, or from some other cause, M. Dalou has not been inspired this time. His Gambetta stands like one of the *bourgeois*, and is flanked, as usual, by allegoric figures.

The jury, composed of friends of Gambetta, with M. Antonin Proust for president, having to choose between the six designs, it was inevitable that M. Aubé should be victorious in the competition. The judges have been just, and public opinion has ratified their decision. But Gambetta's friends have been wrong to have given such proportion to the affair. I do not say that the monument will disappear one day in some turmoil, although that may come to pass. On a summer evening in the Park of Versailles, one stops sometimes before the statue of the Duke of Orleans, which formerly adorned a court in the Louvre, and was erected by subscriptions from the army. It now lies sadly in the fossés of the château, beside many other discarded groups. One never knows in revolutionary countries what future awaits the bronzes and marbles which in a moment of enthusiasm have been erected to notable personages. But while admitting that the third Republic may become eternal, and that the memorial erected in honour of Gambetta may remain in the Square du Carrousel until the end of the ages, still future generations will not the less consider the apotheosis of the Dictator to be a work exaggerated in its pretensions, and a proof of the decadence of monumental sculpture in our time.

On leaving the Beaux-Arts, I can see on the Pont-Neuf the equestrian statue of *Henry IV.*, which stands out in simple and imposing lines against the sky. It is very different from the involved compositions which our sculptors now devise. The illustrious have no need of so great a reinforcement of accessories and such a length of inscriptions on the pedestals. I consider that a simple figure of Gambetta in an oratorical attitude, suggestive of the power of his eloquence, would have better served to preserve the memory of the Dictator than this excess of flowers in bronze and marble which provokes irony.

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**Senor Cruzada Villamayol**, Director-General of Posts and Telegraphs in Spain, died suddenly on November 29. He was a great supporter of national art, and a recognised authority on painting. In 1863 he founded the journal *El Arte en España*, and in 1866 wrote the catalogue of the National Picture Museum, of which he was at one time sub-director. He was also the author of a work on the Goya tapestries.



## NOTES AND COMMENTS.

PARISIANS being proverbially fickle, it is not surprising that they have grown tired of the Opera House, which is so important a landmark in the city, and are wishful that they could recover the old house in the Rue le Peletier. M. GARNIER's grandiose building does not pay, and there has been difficulty in finding a manager to succeed the unhappy M. VAUCORBEIL. Two gentlemen have now undertaken the office. It has been suggested that the building should be demolished, and the site appropriated to some other purpose. The area is 11,237 square mètres, and at 11,000 francs per mètre the ground would be worth 33,711,000 francs. To this should be added the value of the materials, the sculpture, and mosaics. The group of dancers would probably secure a high price from its notoriety. A new opera house could then be constructed by the State. It may be noted, however, as an indication of the modern spirit, that it is gravely recommended to erect the building without calling in the aid of an architect. One of the causes of the change in feeling towards the Opera House may be the fear of the consequences of having a large number of unemployed men. There is a pressing need of work in the building trades in Paris. It was lately said in the Chamber that two years ago there were 100,000 masons in Paris, while at present there are only 70,000, of whom one-half are without employment.

THE Marquis of BUTE delivered an address on Wednesday in last week, at the distribution of prizes in the successful School of Art at Chiswick. His lordship gave the students the benefit of his late experiences in Greece. The Marquis of BUTE advocated the use of woods, stones, and marbles, without adventitious aid in construction. This is remarkable, when it is remembered to what extent gold and colours have been applied in Cardiff Castle. May the conclusion be drawn that his lordship, like other people, has grown dissatisfied with modern Mediævalism. The colouring of materials was, however, practised by the Greeks as well as the Goths. The address was so well received as to make it a subject of regret that the Marquis of BUTE does not more often give the public the benefit of his studies in art and archæology.

THE Society of French Artists have arranged the conditions for the Salon of 1885. There are some alterations of the established rules. Hitherto the exhibition closed on June 20; it is to remain open until the last day of the month. The whole days on Sundays are not to be free to the public. Up to noon payment will have to be made. The first medal in the section of painting being an exceptional reward will be attainable only by artists who have not gained the honour since the foundation of the Society, or, in other words, the same artist cannot twice obtain the medal. The medal of honour, which was not awarded this year in the section of painting, in consequence of the necessary majority of votes not being forthcoming in favour of M. BOUGUEREAU, will be assigned after a double course of voting. First, a number of artists will be elected by the votes of artists who are prizemen, and in the second place the artist among them who obtains most votes is to have the medal. The arrangements have given rise to dissatisfaction, but it is impossible to have a Salon which will please everyone.

SANITARY associations are not an unmixed good. The report of the Glasgow Association states that in cases where a house had had considerable alterations and improvements effected on it at the suggestion of the engineer of the Association, when the same house came to be inspected twelve months afterwards it was occasionally found that, from various unavoidable accidents, the sanitary condition of the house had become unsatisfactory. In one house, where a pipe had been carefully put in, and afterwards tested and found correct, it was discovered that the workmen, when afterwards tramping in the earth, had broken the jointing, and caused a leak by which sewer-gas escaped into the house. If accidents had occurred through the workmen employed by a builder, we doubt if they would be considered "unavoidable." The remedy proposed by the Association is a more frequent examination. Professor GAIRDNER would have one every year. He described his own house as "a perfect magazine of little sanitary defects," and evidently he has got to like the expense and trouble of

periodical overhauls. His brother professors are also curious about the interior of drains, for within a year after the thirteen houses in the college were erected they were all operated on by sanitary inspectors. For householders who live outside the college in Glasgow, sanitary panics soon lose their attraction. This is the only way to explain the fact that so large a number of members have failed to renew their subscriptions.

MR. ARTHUR EVANS, who has succeeded the late Mr. J. H. PARKER as keeper of the Ashmolean Museum, has, in his first report, fluttered the University authorities. The Tradescant collections, which are the basis of the museum, have been the property of the University of Oxford for exactly two centuries. But they have been neglected, and many of the objects were relegated to a loft, from whence they were rescued in a damaged condition by Mr. PARKER. The rooms were utilised for examinations. It is said that offers of collections of antiquities have been rejected owing to want of space. Mr. EVANS asks for sufficient funds from the University chest to enable him to restore the museum to its original use, and to arrange and extend the collections. There will soon be a Professor of Classical Archæology in Oxford, and the museum will be indispensable to his lectures. Mr. EVANS has the aid of his relative, Professor FREEMAN, and his case is so strong it cannot well be resisted on financial grounds.

MR. AITCHISON, A.R.A., is not satisfied with talking about decorative art at meetings; he is earnest in using his influence to obtain commissions from his clients for artists. A beautiful frieze is in progress in Mr. W. E. F. BRITTEN's studio, which is intended for a town-house for which Mr. AITCHISON is architect. The subject represents a number of children ensnaring birds. The background is formed by apple trees, growing so low as to form a hedge, and helping to bind the composition into a whole. While some of the children are trying to decoy the birds others are looking on. In this case the action of the children is suggestive of childishness. They have neither the skill nor the cunning of the adults who may be seen on Sundays in the fields about London. The modelling of the figures is true to nature. The room is to be hung with amber satin, and the frieze is accordingly painted with a richness that is more allied to Venetian than to modern work. Decoration that is so poetic in conception is unhappily too rare in this country, and it is therefore a duty to support an artist like Mr. BRITTEN.

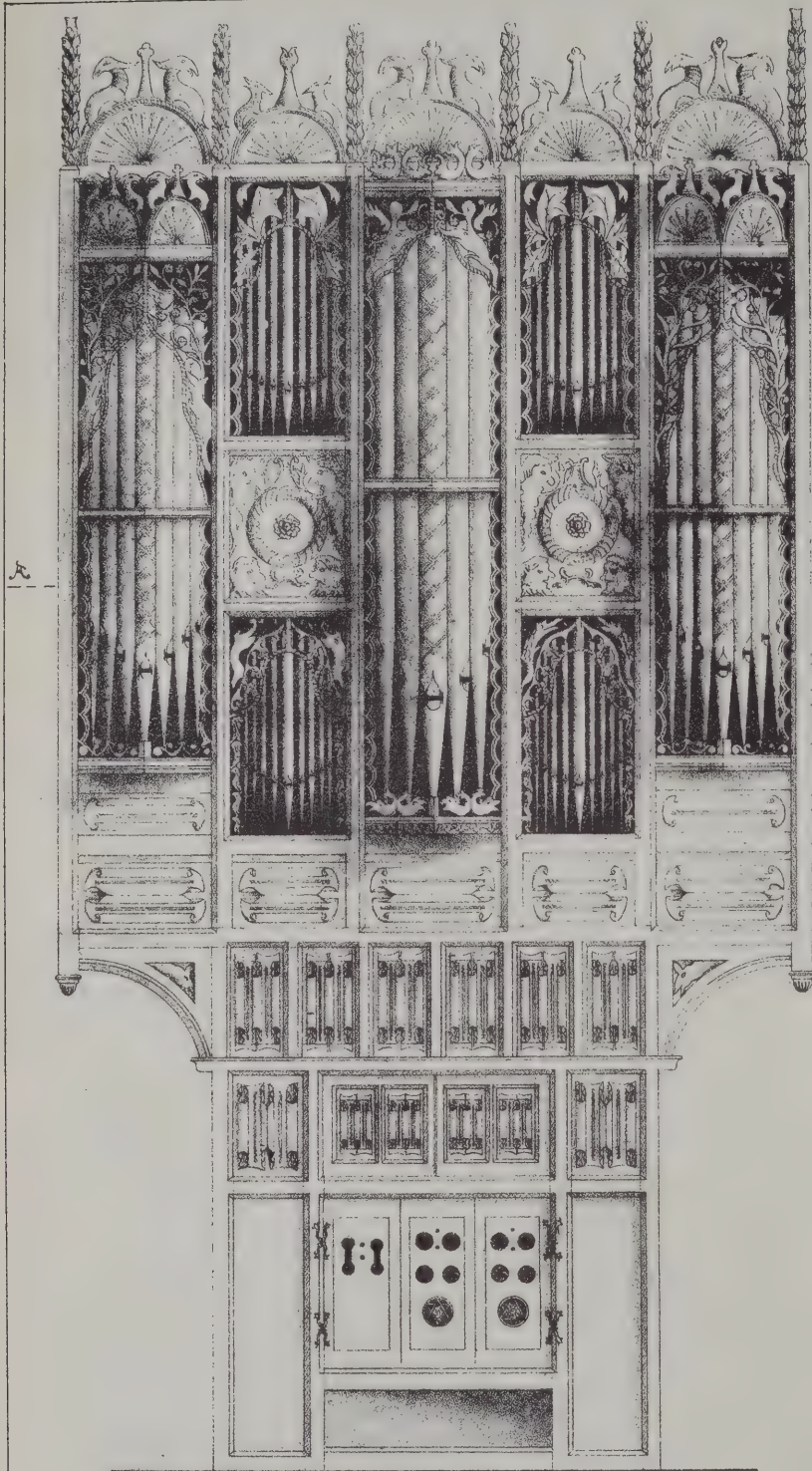
THE most interesting of the "Annuals" is that which has been issued by the conductors of the *Art Journal*. It is a monograph on the life and works of Sir FREDERICK LEIGHTON. The illustrations exemplify the President's career. Steel plates and wood-cuts from the *Art Journal* have been reprinted, and blocks with illustrations to "Romola" have been lent for the occasion. The publication is fairly representative of Sir FREDERICK's best work, from the time when his picture of the procession of CIMA BUE's *Madonna* revealed a new English master until the present year. The "Annual" is of permanent value as a record of a man of whom England may well be proud. It will be an acquisition to many a student.

A LETTER, signed "X," appears in the *Times* on Thursday, which says it is not surprising that the Decoration Committee of St. Paul's "should, for a solution of their difficulties and a satisfactory discharge of the semi-public charge confided to them, turn to the original plan of coffering the cupola of St. Paul's, in accordance with the recorded mature experience of the architect of St. Paul's Cathedral." As the letter is in "leaded" type it may be assumed to be authoritative, and the conclusion to be drawn is that the Committee consider the designs to have failed. The plan referred to is the model which "is now preserved in a chamber in St. Paul's Cathedral, and displays a coffered cupola, very much after the style of the coffered dome of the Pantheon at Rome." Sir CHRISTOPHER WREN selected this manner of treating his cupola after his travels abroad, where he had studied various buildings. He introduces into the soffits of archways in St. Paul's similar coffering, and thus brings into architectural and decorative unity the different curved surfaces with which he had to deal. It will hardly be creditable to the country if no better solution of the difficulty is attainable.





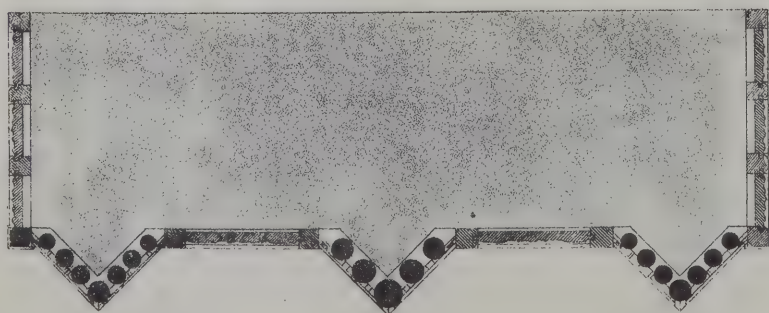




— FRONT — ELEVATION. —



— SIDE — ELEVATION. —



— SECTION — THROUGH — A.B. —

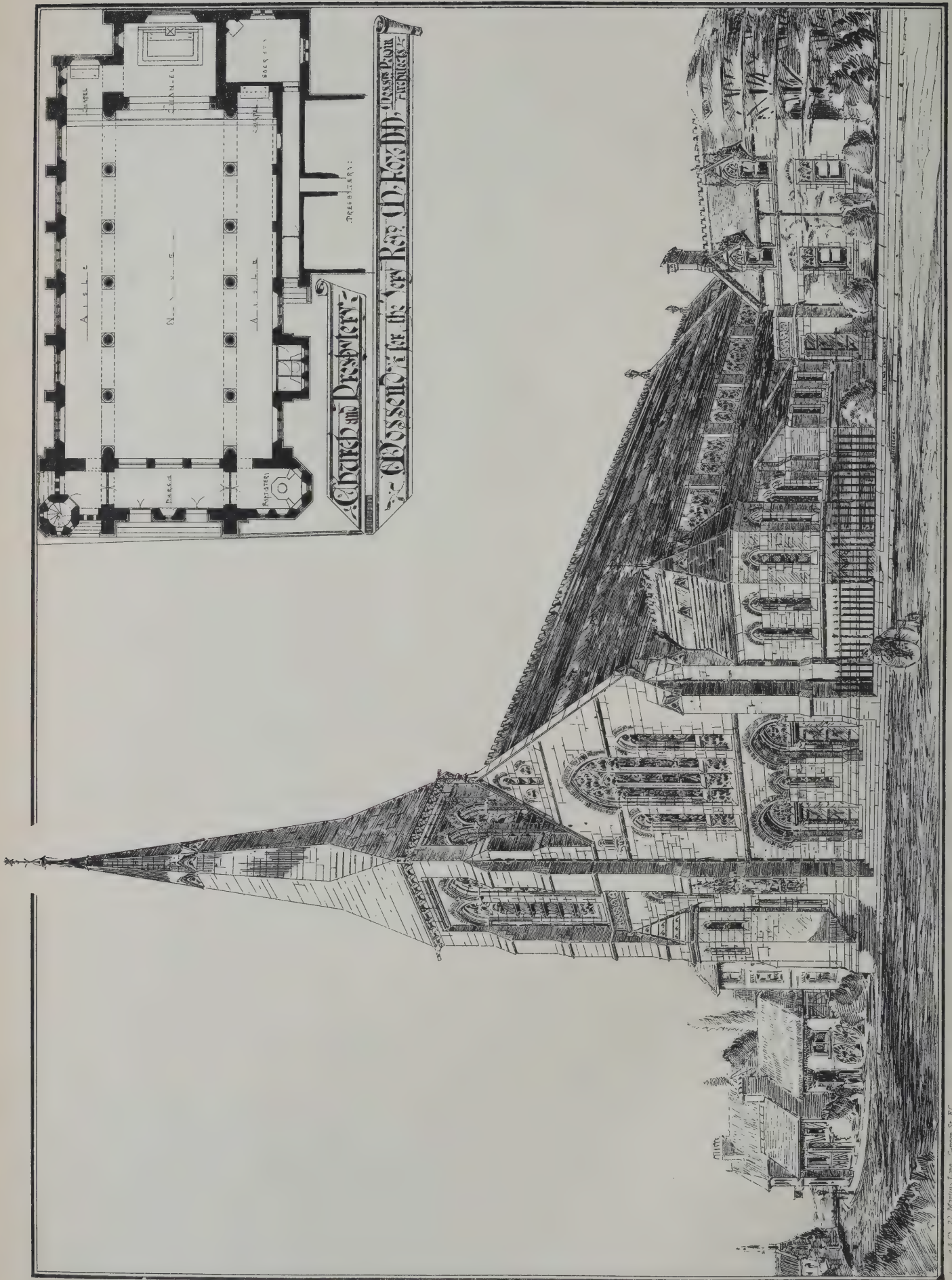
*Measured February 1883.*

*Drawn January 1884.*

















The Grammar School - Norwich.

Sept. 14/83.



Southwark Cathedral - S. Kensington.



No. 10.

St. Nicholas Church.

The Grammar School - Norwich.

Perth Cathedral.

Sept. 14/83.

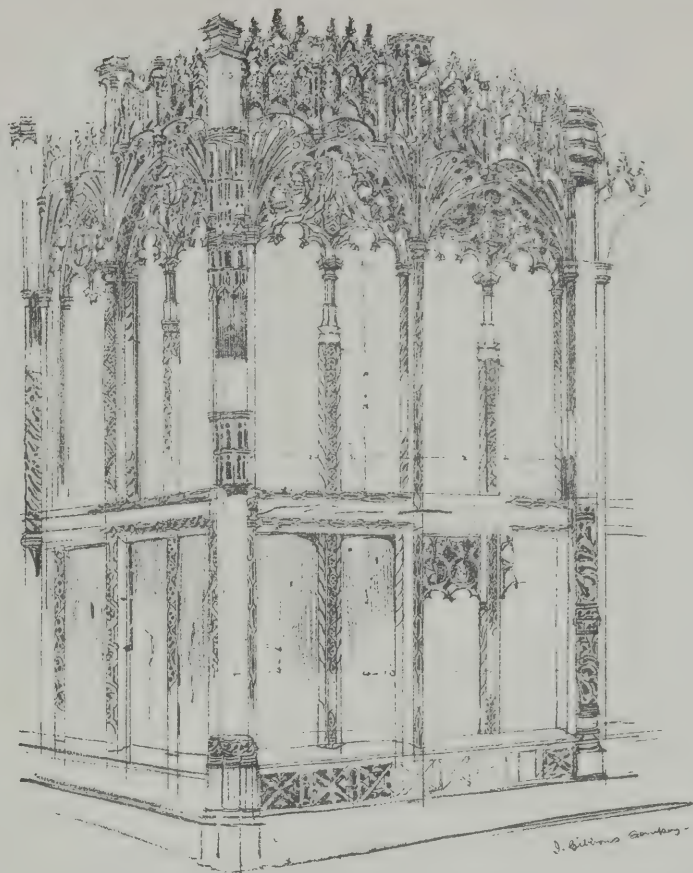


Livingston Church - S. Kensington.





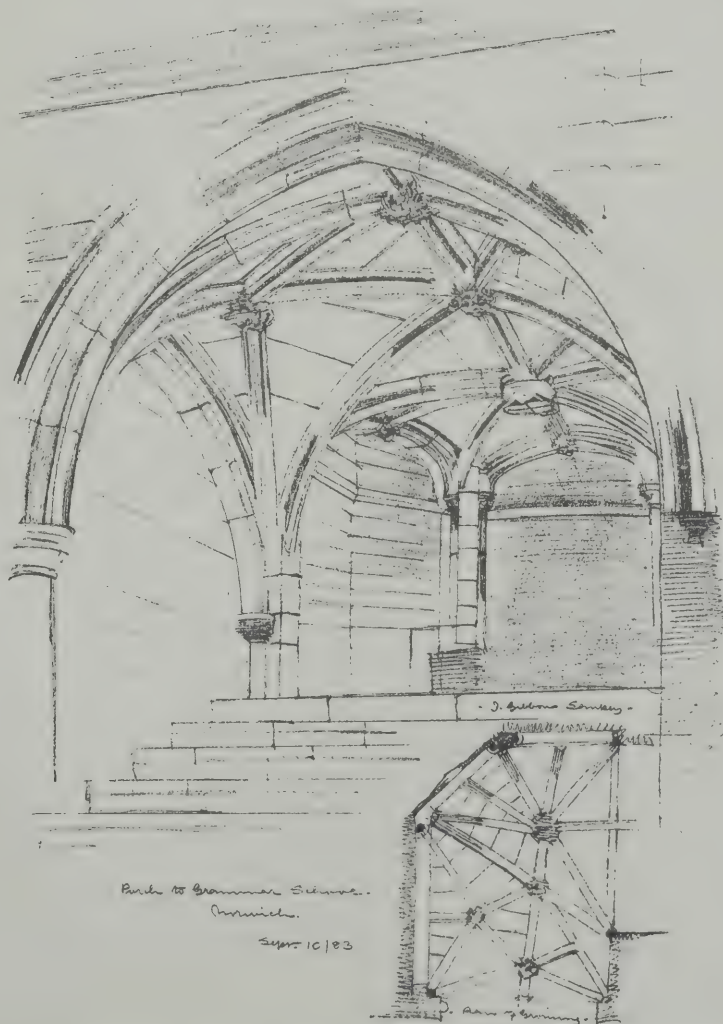
St. Anne's Church.  
Sept 5<sup>th</sup> 1883. J. B. Sanders.



J. B. Sanders



St. Anne's Church.  
Sept 5<sup>th</sup> 1883. J. B. Sanders.



J. B. Sanders

Back to Grammar School.  
Ormsby.

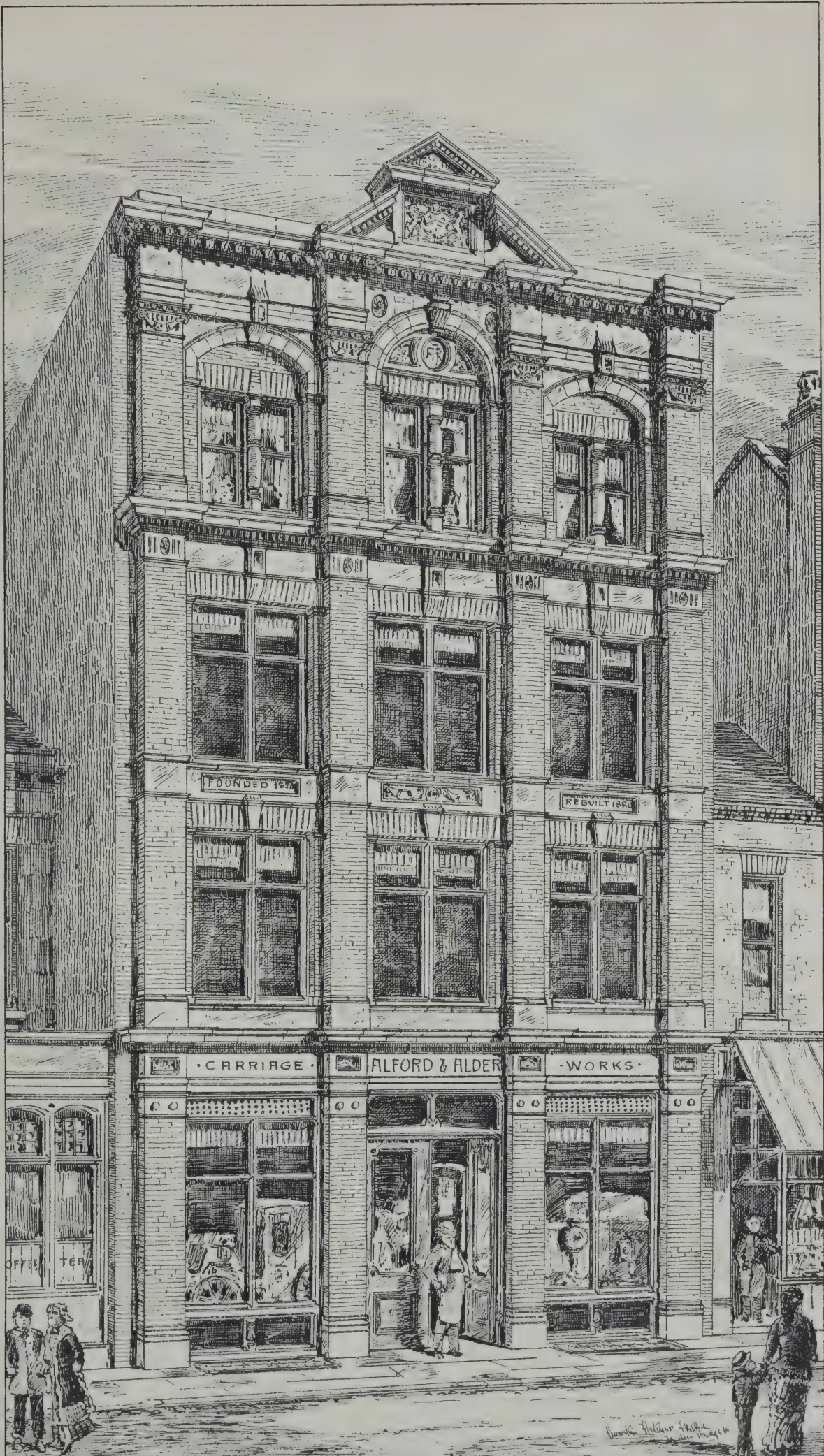
Sept 10/83

Plan of building.









CARRIAGE WORKS, NEWINGTON BUTTS, S.E.

BANISTER FLETCHER, F.R.I.B.A. ARCHITECT.









"INK-PHOTO." SPRAGUE & CO, LONDON.

T. BUTLER WILSON, DEL.

DESIGN FOR WESLEYAN CHURCH, SCARBOROUGH.

BY JAMES WILSON, ARCHITECT.







## ILLUSTRATIONS.

SKETCHES IN NORWICH, ETC.

WE publish reductions of six of the excellent pencil sketches by Mr. J. GIBBONS SANKEY, which were among the collection that obtained the Pugin Scholarship.

CARRIAGE WORKS, NEWINGTON BUTTS, S.E.

A FEW facts in connection with the illustration of Messrs. ALFORD & ALDER's new business premises may interest our readers. The business was established in 1820 by the late Mr. ALFORD. It had a small beginning, but rapidly grew, and in a few years was one of the most flourishing concerns of the kind in London. One of his first customers was the late Mr. THEOBALD, of sporting renown, who came accidentally for some trifle, and was so pleased with his treatment that he soon proved a good friend, and recommended gigs right and left. The speciality in those days—fifty years ago—was Stanhope gigs (now becoming fashionable again under the name of buggies), which Mr. ALFORD improved, and made lighter and handsomer than hitherto; and such a reputation did he get for this class of vehicles, that at one time he had 365—a fact always remembered because the number corresponded with the days in the year—on yearly contract, besides hundreds that were sold right out and sent to every part of England and abroad. The spread of railways, however, altered all this, for the gigs were used principally for travelling about the country by those whose business and pleasure took them from place to place. However, by adapting themselves to circumstances, the firm continued to carry on a successful trade. The extensive premises have been rebuilt. The arms in the view are the Coachmakers', of which City company the senior partner is renter warden. The company continues its connection with the trade in having many practical coachmakers in its Court and livery. Last year the master and three wardens were all coachbuilders; consequently much is done to improve the trade by offering prizes, &c. The works have between 23,000 and 24,000 square feet of floor space, and every part of the carriage is made on the premises.

The new buildings have been carried out under the direction of Mr. BANISTER FLETCHER, F.R.I.B.A.

NEW CATHOLIC CHURCH, MOSSEND.

THIS church consists of nave, aisles, chancel, baptistery and tower. The nave is divided into seven bays, and is lighted at the west end by a three-light window with traceried head, having a single light window with cusped head on each side. In each bay there is a triplet of quatrefoil windows in clerestory, and a three-light window, with cusped head, in aisle. The baptistery is at south-west angle, and is apsidal in form, lighted by six single-light windows with cusped heads. The tower and spire is at north-west angle and when completed will be 124 feet high. There are two doors at west end, leading into a large porch. The gallery is approached by an angle-winding staircase in tower, and is immediately above the porch, and supported by three arches filled in with a wooden screen and glass. The chancel, which is divided from the nave by an arch, is square in form and lighted at east end by a rose window, and on each side by two single trefoil-headed windows. The side chapels on each side have a rose window. The total length of church is 112 feet, and the width of nave and aisles 50 feet. The height from ground to ridge of roof is 47 feet. The style of architecture is Early Decorated. Carlin stone has been used throughout, with polished dressings and rock-faced facings.

The church has been designed by Messrs. PUGIN & PUGIN, Westminster, and carried out under their superintendence by Mr. JOHN DEVLIN, of Glasgow.

DESIGN FOR WESLEYAN CHURCH, SCARBOROUGH.

THIS design was submitted in a recent competition for a Wesleyan church, proposed to be built upon the South Cliff. The materials proposed to be used were hammer-dressed random wallstones, and red tiles for the roofs, fitted internally with pitch pine and English oak. Accommodation is provided for 400 persons, with school, classrooms, and lavatories in the rear. The total cost, exclusive of spire, would be 3,500*l*.

This illustration is from the design of Mr. JAMES WILSON, architect, Leeds.

ORGAN CASE, OLD RADNOR CHURCH.

THE work which is the subject of the illustration is of oak, and is about the only instance of a church organ case of the Gothic period existing in this country. Although it shows signs of the rise of the Renaissance style in some of its ornaments, it is in many parts enriched with strictly Gothic detail, while in all respects it is arranged after the Mediæval manner. Besides being valuable on account of its construction, it is also very interesting from its position in the church, which appears to be the one it originally occupied, namely, at the east end of the stalls on the north side of the chancel, thus giving at least one instance of the way in which the choir of a church was arranged for service during the Gothic times. The out-of-the-way situation of Old Radnor probably accounts for the preservation of this interesting relic, which, however, prior to its restoration in 1872—when a most exquisitely tuned organ was placed in the old case by Messrs. J. W. WALKER & SONS, at a cost of some 500*l*.—had lost nearly all its pipes and machinery, although it retained sufficient detail of the case itself to render a perfect restoration an easy matter.

Our illustration is from a drawing by Mr. E. KEYNES PURCHASE, P.A.S.I., of the firm of Messrs. MARTIN & PURCHASE, Mansion House Chambers, E.C., which was exhibited this year in the Royal Academy.

## THE BIRMINGHAM ART GALLERY.

THE reports of the Museum and School of Art Committee were presented to the Town Council on Tuesday. It was announced that rapid and satisfactory progress has been made with the buildings of the School of Art and the Museum and Art Gallery, and the question of fittings is now under consideration. The sum originally assigned by the Council as the total cost of the school building was 20,000*l*. Some extremely desirable changes of plan have increased this amount by about 1,000*l*., and the committee report that Messrs. Richard and George Tangye, being convinced of the advisability of the alterations referred to, have generously volunteered to defray the additional cost. Four perspective coloured drawings of the school buildings have been made, and have been presented respectively to Mr. Cregoe Colmore, the donor of the land, and to Miss Ryland and Mr. Richard and Mr. George Tangye, the donors of the building fund, as a memorial of their generous benefactions. The architects, Messrs. Martin and Chamberlain, report that the school building will probably be completed and ready for occupation by the month of June next, and arrangements will then be made for the formal transfer of the work of the school to the care of the Corporation.

In reference to the Art Gallery, the committee report that it is now in a very forward state, and the architect, Mr. H. R. Yeoville Thomason, states that it will be ready for occupation by the end of May next. The whole of the building is roofed in and the roof glazed, the plastering is nearly completed, the heating apparatus is fixed, and the concrete to receive the permanent flooring is partly laid. The committee have accepted from Messrs. Strode & Co. a tender for sunlight burners for the entire series of galleries, at a cost of 488*l*. They have also considered the lighting of one of the galleries by electricity, in accordance with the conditions of the Nettlefold bequest of the David Cox collection, but are not yet prepared to report on that subject. The forward condition of the Art Gallery building, and the prospect of the early occupation of it, have led the committee to consider the subject of the necessary staff required. Their present opinion, after making careful inquiry, is that the permanent staff should consist of a curator or keeper, having the general direction of the galleries under the supervision of the committee, a competent foreman assistant, a junior clerk, and probably three ordinary attendants, who, with the aid of the police in keeping order, will be sufficient. The most important of these officers is the curator or keeper, and in the judgment of the committee it is essential that he should be appointed without delay, and should immediately on appointment enter upon the duties of his office, as the time at his disposal between the present period and the date of opening the galleries will be none too much for the numerous and complex arrangements which will have to be made.

The committee have unanimously decided to recommend to the Council Mr. Whitworth Wallis, of the South Kensington Museum, for appointment as curator or keeper of the Birmingham Corporation Museum and Art Gallery, at a salary of 350*l*. per annum, commencing with the date of entering upon his duties, and as an appointment terminable by three months' notice on either side. Mr. Whitworth Wallis is the second son of Mr. George Wallis, keeper of the art collections at South Kensington, and formerly well known in Birmingham for his valuable services as the first master of the Birmingham School of Art. Mr. Wallis is thirty years of age. He received his early training under his father's direction, and was then sent to Germany, where, in the



eminent house of Messrs. Jacob Ravené, Sons & Co., of Berlin, he acquired a thorough knowledge of the German language, and of German art and manufactures. In 1877 he left Berlin, in order to be employed, under the direction of Sir P. Cunliffe Owen, in the Paris Exhibition of 1878, an appointment for which his knowledge of the French language specially fitted him. In June 1879, in consequence of his efficient services at Paris, he was appointed, under the Science and Art Department, as a technical assistant, with the duties of assistant keeper. In this capacity he arranged and conducted the Bethnal Green Exhibition on behalf of the department; and from October 1880 to April 1883 he performed the duties of keeper in the Indian section of the South Kensington Museum, in the absence of Mr. C. Purdon Clarke (the present keeper of the section) in India. In addition to this service, Mr. Wallis organised, for the department, a collection of Indian and other objects, and conveyed them to Berlin in 1881 and arranged them for exhibition there; removed them to Stockholm in 1882, thence later in the year to Copenhagen, and in the spring of 1883 again removed them to Amsterdam for the Dutch Government Colonial Exhibition of that year. In these various services he had sole charge of all the arrangements connected with the exhibition, and received from the several Governments and others concerned the highest commendations of his energy, skill, and competence for the difficult work in which he was engaged. Since the last-named period Mr. Wallis has been employed at South Kensington, chiefly in the Indian Department. He has thus had exceptional opportunities of acquiring experience in the conduct of art collections both in this country and abroad, and of making himself acquainted with the art of various countries; and from the testimonies they have received, and from their personal conferences with him, the committee are satisfied that he has turned these opportunities to good account, and is capable of efficiently using his experience for the special purposes of the Birmingham Art Gallery.

### WESTMINSTER HALL.

THE following letter from Mr. Butterfield has appeared in the *Times* :—

The old Palace buildings have gone, and I think that Mr. Shaw-Lefevre has done well in letting the late Law Court buildings follow them. They were a clumsy attachment, had done their work, and had no further claim upon us.

We all, of course, know that the west side of the Hall has never at any time been seen from the points of view from which it must probably be seen in future. This has been the fate of many a building before now; such changes are constantly occurring, and must occur. One could make a long list of them. There is no case in this instance for despair. A wall which at any rate was formerly, for a period at least, external, becomes again, by removal of the Courts, an external wall, and must be made in itself as suitable and presentable as may be. Certainly it had better not be concealed by buildings, without much graver reasons than have been assigned for concealing it.

The Hall itself is the point of interest, and the simple question for consideration is what can be made of it, and not how it can best be hidden. I believe that only one thing can be done with it, and that other methods will be unreal, costly, and clogging.

Within, the Hall is dark, and, looked at in connection with the roof, the walls are very low.

Without, the roof is overwhelming, the windows now exposed are mean, and the west side is sunk rather ignominiously in a hole.

There are ways of very much reducing the last-named defect if it is only boldly accepted. We are all accustomed to buildings in which various levels of ground have to be acknowledged. The area of ground to the west of this one is sufficiently large to constitute a handsome sunk terrace, if kept at one dead level approached by steps. If turf is laid on such a large level platform with terrace paths, the buried feeling which the present sloping approach suggests would be very largely abated. Something different would be suggested. Its surface must not be frittered away in flowerbeds, but left in strong and severe lines. The Hall, as I hope to see it treated, will be severe and simple, and with such treatment its entire precinct should agree.

Proportion, light, and dignity are the chief things which the Hall itself lacks. The cure, to some extent, for these defects is a lengthening upwards of the windows, which means, of course, increased height in the walls and a bodily lifting of the entire roof. The existing arched window-heads, which include the tracery, would be the only parts removed. They would be laid aside for re-use, in completing each window after its plain jambs had been continued upwards to an additional height of possibly five or six feet. In doing this it would be desirable to add a plain horizontal transom, slightly above the line of the springing of the heads of the existing windows. Any lengthening of the windows downwards is out of the question. The inside sloping sills of those on the west side must be carefully preserved, and I hope that those of the windows on the east side will be made to agree with them.

How much it has been felt by others that more light in the

Hall is necessary is shown by the range of dormers inserted at the gutter level, which are now boarded up. In Brayley & Britton's "Perspective" these are shown as open and traceried. The roof-work, for want of light, is now largely invisible.

The raising of the roof, which must go on gradually in connection with this raising of the walls, is, by the use of very simple machinery, an easy matter. It would be raised together throughout its whole length, and be wedged, until it reached a height at which some courses of masonry could be inserted, after which the raising it would be again continued. A sufficient amount of careful tying together would be required before any movement of the timbers should be attempted. I will not go further into detail. I merely wish to show that the framing of Richard II.'s roof, the most genuine piece of the entire work, would remain intact, and that it would cover, at the conclusion, the whole area of the Hall as before.

I am sure that these proposals cannot be called revolutionary. A more really conservative course cannot be adopted. It treats Richard II.'s work with a respect which he certainly did not show to that of William Rufus. It involves no destruction and introduces no imaginary features, under the plea of restoration.

The north or entrance front of the Hall must, of course, be lifted as much as the side walls. But I trust that its general proportions, which have always satisfied me, will be kept as nearly as is possible. Its flanking towers seem to me admirably suited to the centre gable, which, however, does not touch upon them quite satisfactorily, as Mr. Pearson sees, and they are entirely enough for the purpose.

I say nothing against building along the street line facing St. Margaret's Church, if buildings are required. But I hope they will not be put up for the mere sake of concealing the west side of Westminster Hall. More things can take care of themselves than some people imagine.

I wrote to this effect anonymously in July last, and I have seen no cause since then for changing my view.

Mr. E. W. Godwin, F.S.A., writes in reference to the foregoing :—

The first half of Mr. Butterfield's letter in the *Times* of to-day as to the treatment of this Hall is in accordance with the true spirit in which the conservation of ancient monuments should be undertaken.

But anything more amazing than the suggestions contained in the second half of this letter I never read. Mr. Butterfield attacks the proportions of the work of Richard II.'s architect, and suggests raising the roof by adding to the height of the walls and lengthening the windows, advancing for this tremendous metamorphosis two reasons, first, that the proportions of Richard's Hall are bad; and, secondly, that the Hall is dark and wants more window-light.

As to the first assertion, I beg leave to differ wholly from Mr. Butterfield. The entire building, like many other buildings—Classic as well as Mediæval—is designed on low, broad lines, depending on mass for its expression rather than on elegance, lightness, or delicacy. The broad surface of its roof is in harmony with the broad, low windows, the massive buttresses and low towers. To lengthen the windows or to heighten the towers would be to put the roof out of drawing, and practically to destroy the Mediæval design.

As to the second reason, if it be conceded that the Hall is too dark, let the roof be pierced by lofty dormers of wood above the line of the eaves, and let these be distinctly modern in design, conveying no pretence of having been copied from Plantagenet dormers, which never existed.

But this suggestion I only advance on the supposition that by no other way can sufficient light be obtained. I venture to say that if the windows on the east side had reflectors outside and artificial light were used to illuminate the roof on dark days, the Hall would have as much light as its architecture requires.

### THE ROYAL SCOTTISH ACADEMY.

THE prizes obtained by the students of the Royal Scottish Academy during the past session were presented on November 26. Mr. W. McKay, as senior member of council, presided, in the absence of Sir William Fettes Douglas.

Mr. Geo. Hay, the secretary, read the report of the visitors of the Life School, which stated that they had much pleasure in testifying to the diligence and the progress of the students generally. The aggregate evening attendance during the session had been 2,040, or an average of 17 per night; and 1,729 was the aggregate morning attendance, being an average of 15 per morning. The council were glad to observe the generally high quality of the work. The awards were as follows :—For painting from the life (the Chalmers prize), C. A. Sellar and J. Bowie (equal). For the best drawing from the life, T. Allison; for the second best, J. K. Ferguson and G. Denholm Armour (equal). Keith prize, for the best work of a student in this year's exhibition, T. Scott and G. D. Armour (equal). Maclaine Waters medal, C. A. Sellar. Stuart prize, T. Scott and C. Mackie (equal).



The Chairman said it was gratifying to them to feel that year after year the old perverid temperament of Scotland sent forth new bands of students to carry on the torch of art in a country which was not blessed in many ways with that which tended to the promotion of art. It was pleasant for them all to think that, whatever position Edinburgh and the Scottish Academy must occupy in the near future as a centre of art, as a nursery of art there was no falling off—indeed, very much the opposite, he thought, within the time he could remember. They were met now to distribute to the successful students those awards which were given by the Academy, and by several generous donors who in times past had taken an interest in art. A good deal had been said on the subject of prize-giving and prize-taking. It had been argued that the whole system was wrong; that the pursuit of anything ought to be for its own sake. Well, perhaps in the abstract that was true; but unfortunately, or perhaps fortunately, they could not regulate all their affairs by principles of abstract truth. He thought all of them must be aware that although the main incitement to their endeavours in art had been the love of art, yet there had been times when such stimulus as that which was about to be given to the successful students had advanced them not a little. Indeed, some of them, he durst say, had felt that even such mercenary influence as the sale of an important work had given them a stimulus at times, although far be it from him to say that that ought to be a thing of much consideration. It had been said, sometimes said, that this system of prize-giving had a tendency to make those students who had been successful rest on their oars; and it had been observed that in the following year or following years those students had not attained to what might have been expected of them. Well, if there was a tendency of that sort amongst any of the students, he could give them a cure for it, and that was to cherish a high ideal of their profession. No one who thought what art was, who had any just conception of what art was, of the noble calling to which they were called, could be checked in his aspirations by such a thing. Therefore he would say, "Take your prizes with an easy conscience and an easy mind, and look forward to still further triumphs in many directions." He had said theirs was a noble calling; he thought it was one of the noblest; it was nothing but the propagation of the gospel of beauty. He thought it was a noble thing to go abroad to preach that gospel, and he would just say, before closing, that they were each and all required, not only to preach that gospel by showing it in their works, but by their personal influence; for he thought the personality of an artist counted for almost as much in the education of a nation as exhibitions and museums, and the public exposition of one's works. It seemed sometimes to be a long-delayed thing, this education of a people in the art direction. Sometimes they thought there was no progress making at all; but he did not think so. He thought it was quite perceptible. He was lately assured by a friend who took great interest in art, and who had resided long in one of the great towns of Yorkshire, that coming to Edinburgh was like coming into a different atmosphere in matters of art. So that those old founders of the Scottish Academy had not lived in vain. It was a heroic struggle they made. Quite recently, by the thoughtfulness of their librarian, the members and Associates of the Academy had been presented with a work on its early struggles by the late Sheriff Monro. Reading in that work, they were struck with the heroic struggle that those founders of the Academy made, and they were glad to be able to say they had not struggled in vain.

Mr. Barclay proposed a vote of thanks to Mr. Clark Stanton, the Curator of the School, who, he said, had attended most assiduously to the interests of the students.

Mr. Clark Stanton, in responding, said that earnest, thorough-going work had been the chief characteristic of the class. As to the travelling studentship, he thought it was a great pity it should not be something more than a name. Of course 50*l.* was all very well to put into one's pocket if he had the other 150*l.* there already, but 50*l.* was altogether inadequate for a year's study and travel; and he thought that if it were known what was wanted, something more would be forthcoming. He did not see why the sculptors should not have a travelling studentship as well as the painters. There was not much encouragement given to the sculptors generally. If a sculptor asked for bread, they did not even give him a stone—to cut; and when a good opportunity occurred for a man's distinguishing himself, such as that just past of the Buccleuch statue, it was sent away south. He thought that was a great mistake and a great pity; and it would be a very unfortunate thing if they came to be in the position of the great town of Liverpool, which had an academy and no sculptor. He hoped, however, they would take a little comfort when they could, and congratulate themselves on what had happened lately, and congratulate Mr. Grant Stevenson that, on this occasion at any rate, Wallace was not to be sent to London to be executed.

On the motion of Mr. Gourlay Steele, a vote of thanks was tendered to Mr. M'Kay for presiding.

**Advanced Schools** are about to be erected in Algiers by the French Government, which will cost nearly two millions of francs.

## THE CITY COMPANIES.

### 4. The Joiners' Company.

THE Joiners and Ceilers appear to be one of the ancient fraternities or mysteries of London. Having presented a petition for a charter to Queen Elizabeth, one was granted on April 14, 1570, incorporating and making them into a body and commonalty perpetual. It was ratified on July 20, 1570.

The charter grants that the body or community may yearly and every year elect and make of that commonalty one master, two wardens, to survey, govern, order, and correct the commonalty for that year, and all men, servants, and apprentices of the trade in the City of London and the suburbs, or within two miles in circuit of the City. It is, amongst other things, further granted that none exercise the mystery or faculty within the City or suburbs of London, or within two miles, except he should be thereunto admitted by the master, wardens, or their successors for the time being.

The acts and ordinances made by the master, wardens, and assistants, with the assent of the commonalty of the mystery of Joiners and of Ceilers or Carvers, were duly allowed by the Lord Keeper and the Chief Justices of the King's Bench and Common Pleas. In these by-laws it is noticed that there were then twelve assistants of the mystery or faculty. It is therefore ordained that at all times thereafter there shall be twelve persons chosen by the body or commonalty of the mystery to be assistants to the master and wardens, and whensoever any of the said twelve assistants shall die, or be deprived, or depart out of the City of London or suburbs to dwell and remain out of the City and suburbs by the space of one whole year, that then the commonalty, within fourteen days after every such decease, deprivation, or departure, shall and may elect and choose at their common hall in the City of London one other person as a new assistant, being one of the society, so that there may be continually twelve assistants to the master and wardens.

It is further ordained that on the feast day of St. James the Apostle, and so yearly from thenceforth for ever, the commonalty, or the more part of them, elect one master and two wardens, to hold office for one year then next ensuing. Some subsequent by-laws, dated April 8, 2 James I., were confirmed by the Lord Chancellor and the Chief Justices of the King's Bench and Common Pleas; and there is also a book entitled, "By-laws of the Company of Joiners," made 1740, regulating fines, &c., much of which is obsolete or altered by subsequent regulations.

About the year 1613 great disputes arose in the company touching the mode of electing the officers. It was urged by those members who were working joiners that, according to the true construction of the charter, no one ought to be master or wardens of the company but such as should be working joiners, and for that purpose chosen by the "whole multitude," by which they would have excluded all members belonging to other trades from their places of government in the company. A suit in Chancery was instituted, arising out of a money payment connected with these transactions. An order was made by the Court, dated March 2, 16 James I., whereby the matters in difference were referred to two aldermen, who, upon hearing of the parties, directed that the election of master, wardens, and other officers should be made by the assistants and livery of the company, as it had formerly been, and not otherwise; and that the master and wardens so from time to time elected should be of those which should be of the livery of the company without respect of trade. By consent of all parties this award was adopted as an order or by-law of the company, and the same having been certified unto the Court of Chancery, it was, on June 25, 17 James I., decreed by the Court that the order should be ratified and confirmed, and that the company should be as absolutely bound and concluded thereby as if the same had been judicially heard and decreed upon a solemn hearing of the cause. All such proceedings are exemplified under the Great Seal.

The charter grants that none shall exercise the mystery or faculty of joiners and ceilers within the city and suburbs, or within two miles of London, except he be admitted by the master and wardens; and also, that they shall have the search, survey, and government of the commonalty of the said mystery, and of the works and merchandise within the before-mentioned limits. The by-laws, founded upon the charter of 14th Elizabeth, establish that the coach-makers, trunk-makers, box-makers, cupboard-makers, foreign joiners, and joiners free of other companies, gunstock-makers, and flask-makers, within two miles circuit of the City of London, shall be subject to the government, &c., of this company.

Various orders of the Court of aldermen have also been made for the purposes of enabling the company to exercise those privileges; and an act of common council was also passed, October 9, 6 William and Mary, for the purpose of compelling all persons exercising the trades of joiners, carvers, box-makers, &c., within the City of London, and two miles circuit of the same, to become free of the company.

Conflicting claims have in former times been preferred by the carpenters, gun-makers, and other companies, and disputes have



arisen with them; but these transactions date at a very distant period, upwards of 150 or 200 years ago, and the company do not attempt to enforce their jurisdiction, nor are persons carrying on the trade of a joiner compelled or required to enter the company. Persons of that trade do not prefer the company, and in fact very few belong to it.

The powers given by the charter and act of common council in relation to the "faculty" have been carried out, but the searches, which the charter authorises, have long been discontinued, and the company no longer exercises any control over persons carrying on the trades which it was originally intended to govern and regulate.

The governing body of the Joiners' Company consists of a master, upper warden, renter warden, twelve assistants, and the Court of livery. The master and wardens are elected by ballot. No liveryman is eligible for office who has been a bankrupt or has paid less than 20s. in the pound. The Court holds the chief control. Two Courts are held during the year, and special Courts are called when vacancies occur in the Court of assistants. A fee of 10s. 6d. is paid to liverymen and members of the Court of assistants who attend at the livery meeting.

Sons of freemen and persons who have served the full term of seven years' apprenticeship to freemen are admitted on the qualifications of patrimony and apprenticeship respectively. Other persons are admitted by purchase. The various grades are:—(1) Apprentices, (2) freemen, (3) liverymen. All liverymen must be elected by the Court of assistants. Freemen can claim their admission by patrimony or servitude, and by election by the Court of assistants in case of purchase. Freedom may be obtained by patrimony, servitude, and purchase. The following fees are paid:—Patrimony, 5*l.*; servitude, 5*l.*; purchase, 12*l.* The fees on election for steward are 13*l.* in all cases. The fees to livery are for freemen by patrimony, 20*l.*; freemen by servitude, 45*l.*; freemen by purchase, 80*l.* There are now about one hundred freemen and ninety liverymen. Many of the livery are box-makers, builders, cabinet-makers, carvers, and gilders.

## BIRMINGHAM ARCHITECTURAL ASSOCIATION.

THE first ordinary meeting of the current session was held at Queen's College on Tuesday evening, December 2. The vice-president, Mr. W. H. Kendrick, was in the chair. Among the members present were Messrs. T. W. F. Weston, F. Bailey, H. H. McConnal, H. Lloyd, A. Hale, S. T. Reavell, H. Beck, Victor Scruton (hon. secretary), &c. The secretary read the report and balance-sheet for the past session, and pointed out that the financial position of the Association had never been so satisfactory as at the present time. The following gentlemen were nominated for membership:—Mr. F. J. Yates as an honorary member, and Messrs. W. S. Midgley and S. Payton as ordinary members. A paper was then read by Mr. T. W. Newton, entitled the "English Villa." A discussion ensued, and after a hearty vote of thanks to the author the meeting terminated.

## THE MARQUIS OF BUTE ON GREECE.

AN address was delivered on Wednesday in last week at the Chiswick School of Art by the Marquis of Bute, after the distribution of the prizes to the students. His lordship said that he had the pleasure of being recently in Greece, and he thought he might make the present occasion both interesting and valuable to them as artists if he gave them a kind of report of the actual condition in which some of the most celebrated art centres in Greece were now. He had no doubt they knew as well as he did the art centres of Greece, especially of Athens; and at the same time, there were excavations constantly going on which continually changed the amount of matter exposed to the interest of the artistic world. Of course the Greeks could not boast of those large collections of works of art the museums of which were to be found in Italy and other places. The charm which invested Greece to a great extent depended either upon history or upon nature. For instance, there was Thermopylæ, the glory of which filled the world with wonder. A great deal of the attraction of Greece lay in the perfection of climate and the admirable atmosphere, which the ancients themselves remarked. They imparted to some aspects of nature a specially beautiful colour, and made works of art appear to an advantage which they did not seem to possess elsewhere. Speaking of Athens, his lordship referred to the discovery at the Acropolis of some marble statues upon which there was a great deal of colour. It faded very quickly after the statues were excavated, and the Archæological Society there had to employ artists to take a photograph of them. They were of extreme antiquity; and the colour of the skin, the eyes, the lips, the hair, and the colour of the inside of the garments were represented. In one case he remembered seeing the representation of an under garment of very slight fabric looped down the arm to show the skin through the openings in the blue material; and that had been done simply by painting. Speaking of the original Theatre of Athens, his lordship said it did

not seem to have any stage at all. The actors merely proceeded from the architectural scene behind to the level space in front of the audience. It was extremely to be regretted that no catalogue was published of the contents of the National Museum of Greece. The museum itself was incomplete. He understood the galleries were filled with works of art, and no proper place had been prepared for them. Statues were lying about in fragments, as no time had been found to restore them. What was known to foreigners as the Bazaar in Athens had been burned down within the last two months. It consisted merely of wooden shops. He understood that the market was now to be translated to the new market now in course of erection, so as to make careful examination of the ground of the former, which would remain for ever open. His lordship proceeded to refer to the discoveries made during the excavation at Eleusis, the sanctuary of which was the most interesting in the way of antique remains of any in Greece, so far as he saw. The present town was built on the actual site of the sanctuary; and the inhabitants, knowing the value of that part, had put a price upon their houses, which up to the present time the Archæological Society had found entirely prohibitive in regard to the work of excavation. After pointing out that the discoveries at Eleusis, as well as at Olympia, showed that plaster and painting had been used on the works of art, he proceeded to speak of Sparta, and observed that it was a most singular thing, considering the important position which it filled in history, there should be so little of it left to indicate its former importance. It brought to mind the almost prophetic truth of the remark of Euripides, that owing to the neglect of art by the Spartans, as compared with the attention given it in Athens, the traveller of the future would find it difficult to form a just estimate of the comparative political importance of these two cities of Greece. Unfortunately many of the sculptured stones of great antiquity at Sparta had been used in the building of the modern town Mistia, and those marks which indicated the style of architecture had to a great extent disappeared. He thought greater interest should be taken in the works of Greece, both on account of their historical value—a value which was shared by the Roman and even by the Turkish remains—and of their importance as representing the traditions of classical painting. The Greek nation at the present moment indulged in a certain amount of recklessness in regard to ancient works of art, as they were rather inclined to look to an ideal glory and greatness to which they proposed to attain in the future, than to try to find any lessons from the works of their ancestors. But he believed that now the Greek Government had begun to pay more attention than before to the subject. Before he left Greece he knew that they had entered into a treaty with mosaic artists from Venice to come and see to the state of many of the valuable works of art being discovered.

## EDINBURGH ARCHITECTURAL ASSOCIATION.

THE usual fortnightly meeting of the Edinburgh Association was held on Monday, the president, Mr. G. Washington Browne, in the chair. Mr. James Anderson read a paper, entitled "Roofing Slates and Slating," in which he explained that slate was composed chiefly of silica and aluminum, with the addition of a little iron, lime, magnesia, &c.; the blue slate, which was most common, deriving its colour from iron in the form of protoxide, and the red and purple varieties from iron in the form of peroxide, while green slates, much less numerous, derived their colour from a combination of iron and magnesia. The principal impurities in slate were sulphide of iron and carbonaceous matter, which, when finely disseminated throughout the slates, gave them a blackish colour, and caused them to decompose readily on exposure to the weather. Pyrites, in the form of compact cubes in hard rocks, as in some Scotch and Welsh varieties, did not weaken the slate. True slate was of a beautiful crystalline structure, and the impurities, also, were often found to be crystallised. Frost and exposure to the air affected the cleavage of slate blocks. A frost rendered slate more fissile, but a supervening thaw made them quite refractory. A new frost, however, restored the faculty of splitting, though not to the same extent. When exposed to the air and dried in the sun slate blocks lost their sap, and did not split well. Slate was worked principally in open quarries, but sometimes it was wrought underground by shafts and galleries. The proportion of rubbish to manufactured slates was sometimes as high as thirty tons to one. But in paying quarries, one ton of finished slate to twelve tons of rock was considered good. Proceeding to treat on slating, Mr. Anderson said that the Scotch style was to use thick slates of various sizes, arranged before commencing, and fixed to sarking-boards. The largest slates were put on at the eaves, and they diminished in size to the ridge. The tile-stones or grey slates of Forfar and Caithness were those with which a large portion of Old Edinburgh had been slated. They were hung on lath with pins of oak, pine, and other woods, as well as with the bones of small animals. There were three most important points to be looked to in slating—the pitch of the roof, the cover, and the bond of the slates. Slate was also used for many other purposes besides roofing, such as cisterns, baths, brewers' coolers, &c.;



while slate containing iron and sulphur (*Lapis Hibernicus*) was taken in a glass of gin by the common people as a remedy for internal bruises. In conclusion, the lecturer said he would impress architects with the necessity of providing easy access to chimney-heads, and avoiding traffic on the slates. These accesses need not be unsightly to be efficient, and roofs so protected would not require repairs for many years. A discussion followed, and at the close a hearty vote of thanks was accorded to Mr. Anderson for his lecture.

### JAPANESE ART.

A PAPER on "Old Japanese Art" was read by Mr. Robert M. Young, architect, at the meeting of the Natural History and Philosophical Society of Belfast on Tuesday evening. Mr. Young divided his paper into different sections. The first was devoted to a short sketch of the history of Japan from the time of the Emperor Jimmu, 660 B.C., to the year 1868, when the country was opened to foreigners, and that marvellous series of changes was inaugurated which has transformed the country from being the most backward to the position of the most civilised and enterprising State in the whole of Asia. The lecturer then proceeded to treat of the feudalism which formed so curious a part of the internal economy of Old Japan. He showed that it was almost identical with the military feudalism prevalent in Mediaeval Europe. The daimio, or baron, was then described. His territory and castle, with the dwellings of his vassals, the samurai, were shown to completely resemble the strongholds of the Middle Ages, as depicted in the pages of Froissart and Scott. The outline of the most popular Japanese tale of chivalry, the "History of the 47 Ronin," was given to show what loyalty and devotion were displayed by the retainers to their lord in critical times, death being always preferred to dishonour. The swords of the various periods were described in detail, and some interesting facts given of the etiquette practised with regard to that national weapon. A quotation was given from the "Romance of Prince Cengi," written by a learned Japanese lady in the tenth century, to show what advanced ideas were prevalent at that remote period with regard to art. Even the modern catch-words of "correct taste and high æsthetic principles," are found in this remarkable novel. A few of the leading facts in the history of Japanese art were then noted, particularly as regards the life of the Hogarth of the country, the renowned Hokusai. By the kindness of Mr. W. H. Patterson, his famous work, "The One Hundred Views of the Mountain Fusi-yama," was exhibited to show his skill. After a full explanation of the general principles on which their art is founded, and a description of the way a Japanese artist works, a quotation was given from Mr. W. Anderson, illustrating the distinction between the ordinary artisan and the inventor artist, who, gifted with talents of a very high order, designed and carried to completion the splendid works in bronze, porcelain, and lacquer which have reached Europe. Some amusing instances of the marvellous skill said to have been attained by the old masters were cited, such as that of the artist who drew a dragon, and, as he completed the eye of the monster, it rose and flew away. The famous horse painted on a temple screen was also mentioned, which was nightly accustomed to leave the picture and roam the rice fields, but was at last recognised, and its ravages stopped by blotting out the eyes of the masterpiece. The different substances employed in their art industries were indicated, and the concluding portion of the lecture was devoted to describing the more important, such as lacquer, ceramics, metal-work, and enamels. A concise history of the methods employed in lacquer was given, and examples of this beautiful art shown, more particularly on sword mountings. A fine example in the possession of the reader was exhibited, with eight distinct varieties of lacquer used on it, besides many other processes of inlaying and other arts peculiar to Japan. The remarks made on the various kinds of pottery and porcelain were illustrated by specimens of each manufacture. The stone wares of Hizen, Rako, and Soma were discussed, and the porcelain of Kaga and Kioto; whilst the famous Satsuma and its imitations were fully explained. The subject of metal work occupied some time, as, by the kindness of Mr. Henry Matier, J.P., a very choice collection of the finest old bronze and inlaid work was exhibited and described. Much satisfaction was expressed among the audience that the late disastrous fire had not materially injured any of these masterpieces. The subject of bronze casting was entered into and a brief account given of the Japanese process of founding, known as "cire perdue." The different subjects commonly chosen for delineation by their craftsmen were mentioned at length. The religions and mythology of the country were briefly touched on, the seven favourite divinities and the five monstrous animals frequently found on their art productions being remarked on, and examples of some of them pointed out as fashioned in bronze, pottery, and enamels. The subject of enamels was taken up in the last place. The superiority of Japanese work was indicated by a comparison of some examples of the middle period, in the form of plaques and vases, with old Chinese work. The lecturer then concluded by giving a short description of some of the beautiful works in bronze and other metals kindly lent for exhibition on the occasion by Mr. Henry Matier, J.P. Fortunately,

they have sustained little or no damage from the recent fire at Dunlambert. Much satisfaction was expressed by the audience that this was the fact. A large flower vase from a Japanese temple, cast in bronze, and properly inlaid with silver, having panels on each face in raised metals, one representing a god seated beside the national vehicle, the jinrishka, was much admired. Another was particularly noticeable for the skill with which a dragon, encircled by clouds, was depicted. A large plaque, with a monstrous cuttle-fish seizing an unfortunate wretch, who has endeavoured to pilfer a vase lying on the sea beach, was much remarked for the masterly skill displayed in its manipulation and the precious metals used. Specimens of the best work, in wrought iron, inlaid with gold, and chased in high relief, were also shown. The incense burners, of elaborate bronze work, were unique of their kind.

### THE PARLIAMENTARY COMMITTEE ON WESTMINSTER HALL.

THE Select Committee on Westminster Hall met again on Tuesday, Mr. Shaw-Lefevre in the chair.

Mr. Charles Barry laid before the Committee some plans to which reference had been made at a previous sitting in regard to the practicability of carrying out his father's plan of 1855, without making the roadway between Westminster Hall and St. Margaret's Church too narrow. The plans showed that a roadway might be made of the width of 83 feet, the widest part of Parliament Street being 67, and no part of the roadway running by Parliament Square being wider than that. The actual carriage way would be 55 feet, as against 37 feet 3 inches now, in the narrowest part. If the buildings now protruding were moved 50 feet, that would leave a court of 40 feet wide at the south end, and of 59 feet at the north. He proposed a gallery or cloisters one storey high, which would have no effect with regard to the height of Westminster Hall.

Mr. Shaw-Lefevre asked whether he thought a space of 40 feet from the proposed building to the main wall of the Hall would be enough to allow sufficient light to enter the Hall.

Mr. Barry answered in the affirmative. With regard to the question which had been put to him as to whether his father had raised the floor of Westminster Hall, he had stated that he did not think so. He had since obtained the most precise information he could on the subject, and had ascertained, on the authority of a gentleman (Mr. Pressland) who assisted his father in the office in 1855-56, that the question of how the roof of the Hall could be safely raised by mechanical means was discussed, but it had been no part of the scheme to make any alteration in the level of the floor of the Hall. It was a fact that the building Sir Charles Barry proposed to place in front of Westminster Hall was very much of the same character of design as the existing front of the House of Lords building. He (Mr. Barry) had expressed a strong opinion as to the insufficiency in height of the rooms proposed by Mr. Pearson in his cloister—insufficient for committee-rooms.

Mr. Shaw-Lefevre: But are they not sufficiently high for other purposes?

Mr. Barry: No doubt uses might be found for them, but I should think they would make very inconvenient committee-rooms.

Mr. Shaw-Lefevre: Does it surprise you to hear that some of the committee-rooms in the House of Lords—the room, for instance, in which the Railway Commissioners sit—is only 30 feet long by 20 feet broad and 13 feet high?

Mr. Barry said he was surprised to hear it if they were intended for committee-rooms, but that did not alter his opinion as to the insufficiency of the size and height of Mr. Pearson's rooms.

Mr. Shaw-Lefevre: Do you know that there is not a single room over 13 feet high in the Treasury building?

Mr. Barry: I know that they are very bad rooms for official purposes.

Mr. Walter: Do you consider the room we are now occupying very good?

Mr. Barry: I consider these committee-rooms very good in height; but when they are too crowded they need more floor space.

Mr. Shaw-Lefevre here observed that he should like to give evidence on this point. During the time he had held office he had had to consider the accommodation and arrangements of the Parliament building perhaps more than any other First Commissioner; therefore he thought it was desirable that he should put his views formally before the Committee. The Committee would be surprised to know what a large proportion of this great building was occupied by private houses, and his idea had always been that additional accommodation might be found in the building by reducing the private houses, especially those of the officers of the House of Lords. There was no earthly reason that he could see why those officers should live under that roof, and he had suggested to the House of Lords that they should use those rooms as committee-rooms and find accommodation for their officials elsewhere. That matter he should be prepared to state his views upon if he were to give evidence.



In reply to Mr. D. Peddie, the Chairman said he thought there would be no objection to other members of the Committee giving evidence.

Mr. J. J. Stevenson said the proposal of Mr. Pearson would be an unwarrantable tampering with and alteration of an old historic building, a record of the past, which ought not to be altered merely to suit our views of what ought to be. He objected to the alteration of the towers, which would give the Hall the appearance of a church. His idea was that four considerations ought to be taken into account in the restoration; one was to restore an ancient building; another was to preserve the wall of Westminster Hall; another was to complete Westminster Palace properly; and finally, to make a really useful building of what was added. He felt no desire that the side of the Hall should be covered. He would readily see it left open. He did not know the intention of those concerned originally, but he thought they were indifferent whether the west wall should be seen or not. He would prefer Barry's plan to be carried out if a building was to be put there. But he would leave the wall and cover it with "post and pan" work, or a wooden framework with plaster and two rows of wooden windows. With the buttresses he should seek to produce picturesqueness rather than beauty. If the buttresses were developed as much as possible his suggestion would not be out of harmony with the rest of the building, and the public would admire it, especially if the open space were laid out in grass. His idea was that as the west side of the Hall was exposed it should now be restored as little as possible. His plan would not cost much, but that ought not to be a consideration. He objected to Mr. Pearson's restoration, because it pretended to be what it was not—a restoration, and in building it, he believed all the old work would be destroyed. Mr. Pearson's plan he believed would lead to the ultimate destruction of the wall of Westminster Hall.

Mr. Walter: You recommend this plan of covering the wall with beams and plaster as a temporary measure? What lies at the bottom of your mind is that Sir C. Barry's plan will at some time or other be carried out?

Mr. Stevenson: I think that if more rooms are wanted for Parliament the right thing to do would be to carry out Sir C. Barry's plan.

Mr. Walter: Supposing neither Sir C. Barry's nor any other plan were carried out to increase the whole building, would you contemplate this plaster scheme of yours as a permanent arrangement?

Mr. Stevenson: Yes; I see no reason why we should not preserve these buttresses and walls as long as we can.

The Committee afterwards adjourned.

### GLASGOW HOUSES.

A MEETING of the members of the Architectural Section of the Glasgow Philosophical Society was held on Monday, when Mr. James Thomson, architect, read a paper on the subject of "Other Hindrances to Health in our Homes." Mr. James Sellars occupied the chair.

Mr. Thomson remarked at the outset that it had been said that a great many articles manufactured were made not for use but for sale, and the saying had been unfortunately extended to dwelling-houses generally, many of which had been got up for the market to enrich builders. The title which he had chosen for his paper suggested many things, but he would have to confine himself to one or two matters regarding the erection of houses which he thought were deserving attention. He would avoid drainage, as it had been so fully discussed and written about of late that the public were fully enlightened on the subject. It was to be regretted that in Glasgow the architects had not a greater control of the buildings put up. He thought there ought to be a separate Building Act for Glasgow, such as the Institute of Architects had been urging upon the authorities for many years past. In erecting a healthy house the first thing to be seen to was the preparation of the site. In a city especially, where they were confined to a limited plot of ground, they could never be certain of the kind of site they were about to build upon. Upon the Blythswood Estate he found a site which gave him every satisfaction, and he founded his estimates for a building just across the street on the assumption that a similar site would be found. When the ground was opened, however, they found nothing but a moving mass of mud, which required to be dealt with most carefully. There were so many old covered up streams and water-courses that a kind of soil was sometimes encountered they probably had never thought of. He reminded the members that by means of the Underground Railway works now in progress they could obtain many valuable hints as to the soils for sites along the route. A bad feature to be met with in Glasgow was in connection with houses built upon sites made up of all sorts of rubbish, from which, after the house was erected, gases arose which defied the doctor and all his powers. He advocated the laying down of a strong layer of concrete, which would prevent gas from the soil entering the house, while it could be grooved for the putting in of the soil-pipes, and would enable them to be got at at any time. The next cause

of unhealthy houses was the complex system of water fittings in many houses, the connections of which with the drains were of the most defective character. He would have all such connections with dressing-rooms, next to sleeping apartments at least, done away with. Then there was a great deal of annoyance and injury to health caused by gasfittings being either badly put in or getting damaged, admitting of escapes, often of a serious kind, and in bedrooms and sitting-rooms a most unwholesome atmosphere was sometimes generated. The improvement and development of the electric light would, he believed, in the end tend to obviate this. Smoky chimneys, with all the irritation they occasioned in households, were also detrimental to good health. Notwithstanding the many excellent devices for curing smoky chimneys brought out of late, the best remedy was good and careful workmanship in the erection of the buildings. Indeed, in all departments this was of special importance in itself, in order that a healthy house might be built.

A discussion followed, and the proceedings terminated with votes of thanks to Mr. Thomson, and to Mr. Sellars for presiding.

### THE BLACK GATE, NEWCASTLE.

AT the last monthly meeting of the Newcastle Society of Antiquaries it was reported by Dr. Hodgkin that the Black Gate Committee were nearly at the end of their labours. They had paid the contractor much the larger part of his bill, and paid for the cases and so on. They, however, saw a prospect of being a little short. He was not prepared with an exact financial statement, but he thought they might perhaps want about 100*l.* more or less to complete the Black Gate as they should like. What they suggested was that they should have a formal opening of the Black Gate, at which, no doubt, their President would preside, and make them one of his interesting and heart-cheering addresses, and at which they should also try to get some of their friends to make up the deficiency which still exists. It had been suggested that it would be well to have a loan collection at the Black Gate on the occasion of the opening, in order to give a little more *éclat* to the occasion, and they fancied that most of their Northumbrian friends would be willing to aid them by contributing any objects of interest they might have. The loan collection exhibited during the archaeological week scarcely received justice, as people were busy visiting Lindisfarne and other places, and if it met the approval of the Society, the committee suggested that at the opening of the Black Gate there should be another loan collection exhibited, and that it should be more especially Northumbrian. They suggested January 3 as a suitable day for the opening. It was agreed that there should be a formal opening of the Black Gate, that the secretaries should proceed at once to get together a loan collection for exhibition on the occasion, and that decision as to the exact date should be left to the council.

### THE CONSTRUCTION OF FIREPLACES.

AN informal lecture on "Fireplaces" was delivered on Monday to the members of the Leeds Architectural Society, by Mr. T. Pridgin Teale, M.B. The lecturer said he had accepted the invitation in the hope of being able to enlist the judgment, sympathy, and active help of the architectural profession, who could do more than any other body of men in the furtherance of the object he had set before him, viz., to revolutionise the system on which the fireplaces of this kingdom are constructed. By his plan coal could be burned most effectively and economically as a producer of heat, with at the same time the amount of smoke very materially reduced. In the national work of smoke abatement architects could render most efficient aid, as in their hands rested almost universally the designing of the fireplaces of new buildings. He had discovered that nearly every existing fireplace could be made more effective, more perfect in the combustion of cinders, and more cleanly. The means adopted did not require any structural alteration; the simple expedient of closing the hearth chamber by a movable shield which he had called an economiser was alone necessary. He had already said that this could be beneficially applied to every existing grate. Severe as was the test for such a simple contrivance, it had stood the trial remarkably well. The lecturer then stated the various principles on which fireplaces should, in his opinion, be constructed. A discussion followed, in which several of the members joined. The Chairman (Mr. E. Birchall) said he had tried the economiser in his own home, and it had resulted in a saving of fuel. Mr. Lewis, the curator, agreed that fireplaces should be made of fire-brick as much as possible, seeing that fire-brick accumulated heat, and caused it to radiate into the room. Why, then, should an iron fire-grate be used? A perforated fire-clay grate might be substituted. Stoves should not be recessed; projecting fronts would be an improvement.

Mr. Teale agreed with the use of a fire-brick grate, but pointed out that it would require to be of great thickness. The iron grate



in this case, however, did not conduct the heat away. The projecting fronts would doubtless obviate the necessity of a back formed to throw the heat into the room. In reply to Mr. Armistead, Mr. Teale said that the economiser, ugly as it might be, had answered well in old-fashioned houses, where the height of the fire formed a large air-chamber. It did not matter whether a house was in a crowded or an isolated place, or what number of doors or windows a particular room had, for the success of the economiser. Accurate fitting was desirable, though it was not absolutely essential. He had had fires on this system for three or four years, and the fire-grates had not burned out. He heard they had done so in certain cases. Perhaps in those instances it was the fault of the iron, and it was for makers to ascertain whether cast iron or wrought iron was most suitable. He would recommend the bars to be crosswise and not lengthwise, and that they should be only about a quarter of an inch apart. The grates should also be movable if possible. In answer to Mr. Bulmer, Mr. Teale said that, within reason, the size of the hearth-chamber was not very material.

Mr. W. H. Thorp spoke of the success of the use of the Rifle-back stove. He remarked that Mr. Teale seemed to be a social reformer. He had shown them how to drain buildings, and now he was teaching them how to arrange their fireplaces. He was pleased to move a vote of thanks for the lecture.

Mr. J. W. Canon seconded the motion, saying that Mr. Teale's position was so strong as to be beyond criticism. He pointed out that architects, of all other men, were less able to introduce novelties, as it was necessary to be thoroughly convinced that they would do all they claimed to accomplish before adopting them.

The motion was cordially adopted.

In reply, Mr. Teale, referring to Mr. Canon's remarks, said that he found the hot-air chamber more advantageous than in the case of bricked-up stoves. Probably in a room with 15,000 cubic feet radiated heat would not be ample for warming, and conducted heat might be necessary. He was satisfied that in three years' hence most of the people in the kingdom would believe in the utility of the economiser.



#### The Decoration of St. Paul's.

SIR,—I shall be glad if you can spare me space for a few lines on the above, especially as I feel that I perhaps failed to clearly explain myself at the Institute.

After such great artists as the late Mr. Stevens and Mr. Poynter, and others, have, after full consideration, been in a manner entrusted to design the decoration of the dome, it seems to me very ungracious, and almost unprofessional, for such a body as the Institute to lend itself to such criticism as is concerned in the suggestion of alternative schemes. If the greatest artist that ever lived was to arise in our times, one may be quite sure that he would meet with quite as much opposition and counter-suggestion as either Mr. Burges or Mr. Stevens. It is doubtless annoying to many of us that we were not in a position to make our voices heard at an earlier period; but we may be quite sure that, should we be now consulted, the rising generation would not exempt us from the same process of criticism. At the same time, there seems to be no reason why we should not at this stage by temperate criticism try and improve the design sketched out. The artists selected are probably open enough to consider any suggestions that may be of value.

In such remarks as I made at the Institute I by no means wished to suggest another scheme, but to enforce certain principles that I thought might advantageously be applied to the case. While I myself like neither ribs nor circles, I can conceive certain modifications might render them unobjectionable. That it is possible ever to get a perfect design to please everyone is a ridiculously Utopian dream. Certainly had the old masters waited for that we should have had no work from them.

The alterations that seem to me to be desirable are, firstly, that a greater prominence should be given to the gold ground, which should also be made to show conspicuously through the circles and the ribs. These would then be reduced from constructional features to pieces of graceful ornament forming a kind of network over the ground.

Secondly, that a return should be made to the rib treatment of Mr. Stevens's design, in which the bases of the ribs are virtually cut off from the peristyle, and the so-called architecture of the ribs is constantly interrupted. This seems, in some degree, achieved by Mr. Poynter.

Thirdly, it appears to me that it is also most important that any pictorial work should be confined to the lower portion of the dome. Both the designs fixed and those sketched seem to me to be most decidedly top-heavy, and the eye would, I think, gladly welcome in the upper part a considerable expanse of plain gold.

The upper part of the ribs would then disappear, the objection-

able sham constructiveness be got rid of, and the call for some vertical division still be satisfied. The rib would, in fact, be very much resolved into the tall graceful scrolls common in Byzantine work. Moreover, the only part where one could employ colour and design with any effect is towards the base, where the colour would be contrasted with the neutral tones of the drum, and cut off from the overpowering gold by a considerable use of white. It is understood, I believe, that the treatments of portions below the drum are merely experiments of Mr. Stannus, and not put forward as a scheme, otherwise they would be, of course, fair game for criticism.

I am, Sir, faithfully yours,

Guildford.

RALPH NEVILL, F.S.A.

#### Awards for Ventilators at the Health Exhibition.

SIR,—Seeing that Mr. Clark has not accepted our invitation to publish in your columns the letter which he says was sent to us inviting us to send our ventilator to be tested, or the one he states he received from us declining to comply, it can only be inferred that he is unable to substantiate his statements by the production of these letters. We have already affirmed that we were not invited to submit our air-pump ventilator, or any exhaust ventilator that we make, for the purpose of being tested, or that we declined to comply with such an invitation. This we adhere to, and no proof has been furnished, though specially invited, to show that we are in error. As to the mode of conducting and value of the experiments in question, your readers, from the mass of evidence which has now been submitted, will be able to form their own opinions.

Thanking you for the courtesy you have shown us in inserting our letters in your valuable columns,

We are, yours truly,

ROBERT BOYLE & SON.

64 Holborn Viaduct, November 29, 1884.

#### NOTES ON NOVELTIES.

**Jennings's Improved Water-Closet Apparatus.**—Anything emanating from the Stangate Works, Lambeth, is always looked upon with interest, owing to the reputation the late-much respected proprietor secured as a sanitary engineer. The latest introduction of which we are about to speak is a water-closet, urinal and slop-sink combined, and is named the "Pedestal Vase." The Health Exhibition introduced us to one of the finest collections of this class of goods ever brought together, and that of Mr. Jennings was by no means least amongst them. The new idea sought to be carried out in water-closets, of which this apparatus is an exponent, is that there shall be no wood or plaster work about the apartment whatever save the seat of the closet. It is suggested that the floor shall be tiled, or of mosaic work, and the walls *en suite*. The closet itself is a porcelain pedestal of ornamental shape on the "wash-out" principle, the lid (of wood) being hinged, and when lifted back, the vase forms a urinal or slop-sink. There is no doubt of the advisability of carrying out such a system from an hygienic standpoint, and we cannot see how any valid reason can be urged against it, except that it is too expensive for ordinary houses. But if the principle is admitted means will not be wanting to carry it out in a cheaper form. The ease with which an apartment so constructed can be cleansed must be apparent, and we have no crevices or chambers for the accumulation of dirt or diseased germs. All is open and visible to the eye, and the slightest inattention on the part of domestics must be detected. A noteworthy feature in the Pedestal Vase closet is that the body can assume a more natural position, thus securing greater comfort and convenience. But its greatest claim to favour is its superiority in discharging its contents every time it is flushed, and with only the orthodox two gallons of water. At the Health Exhibition it underwent a most crucial test at the hands of the jurors, presided over by Mr. Baldwin Latham, C.E., which is worth describing in detail. Ten apples (averaging 1½ inch in diameter) and a flat sponge about 4½ inches in diameter were thrown into the basin. The water as well as the whole of the dry surface was blackened with plumber's "smudge," and the sides covered with four pieces of thin sanitary paper, which adhered closely to the soiled surface. The handle of the cistern (one of Jennings's syphons) was then pulled, and after the passage of the water (two gallons) through the vase, which was completed in seven seconds, the whole of the contents we have mentioned were carried away into the receiver, leaving no trace of soil or paper on any part. Even if the arrangements for tiling cannot be carried out in all houses, there is no reason why this closet should not be fixed, and, on the point of economy, it compares favourably with the lowest-priced closets that cannot claim such advantages. We understand they have already been fitted in several hospitals, hotels, &c., and it can only be a question of time for the adoption of this kind of closet to become general.

**Indiarubber Stamps.**—Few persons, we suspect, have any idea of the extent to which indiarubber stamps are now made use of in commercial pursuits, or the number of persons engaged in their manufacture. It is not merely the stamp



itself that labour is employed in, but the framework or press in which each of them is encased has to be taken into consideration, which forms no inconsiderable item in the cost of the appliance as a whole; and in looking at the manufactured article, we cannot but be struck at the moderate price at which these useful appendages to the office or warehouse can be now supplied. Our Government alone bring such a number into requisition year by year that a small manufacturer should be enabled to keep his works busy in supplying them, was he fortunate enough to secure the entire order. It is not surprising to find Birmingham in the "van" in the manufacture of these *bric-à-bracs*, and we may fairly single out Mr. A. Berkley, of Livery Street, in that town, as having been one of the most successful as well as one of the best makers. Leaving the indiarubber or stamp out of the question, there is probably no town in the kingdom so well adapted to manufacture the metal portion of the appliance, and there is little doubt that makers in other localities of the indiarubber stamp draw upon the "hardware village" for their fittings. Although the stamp itself is, after all, *par excellence* the important feature in the eyes of the user, if it is not accompanied by true and easy working mechanism and good ink, it would prove of little worth, and in each of these departments Mr. Berkley has scored a success. Architects, builders, and contractors are amongst the many who use indiarubber stamps to a large extent, and we can consistently recommend Mr. Berkley's stamp to the favourable notice of our readers.

## LEGAL.

### Supreme Court of Judicature.—Court of Appeal.

(Before Mr. JUSTICE HAWKINS and Mr. JUSTICE A. L. SMITH.)

#### FORMATION OF STREETS.

This was a case stated by Mr. Cooke, one of the Metropolitan Police Magistrates, for the opinion of the Court on questions of law which arose before him upon a summons taken out by the Metropolitan Board of Works against Messrs. Lathey Bros., builders, complaining that they had unlawfully formed or laid out a certain road, passage, or way, to wit, West End Avenue, Finchley Road, for building as a street, for the purposes of carriage traffic, of a less width than 40 feet, measuring 20 feet from the centre, contrary to the Metropolitan Management Acts, 1855 and 1862, and 41 and 42 Vic. c. 32, and by-laws.

The case was heard on April 4, 1884, when the Board's summons was dismissed, and against this decision the Board now appealed. Sir H. Giffard, Q.C., and Mr. Besley appeared for the appellants; Mr. Findlay, Q.C., and Mr. McColl for the respondents.

Mr. Besley, in opening the case, stated the respondents had built a house fronting on Finchley Road, and flanking on the above lane, without giving the statutory width; and the following questions of law had been reserved by the magistrate:—(1) Whether the respondents, having given notice to the district surveyor, the appellants were out of time in taking their proceedings? (2) Whether the respondents, by erecting a house fronting on Finchley Road, and flanking on to the lane in question, had committed the offence laid in the summons?

After hearing the arguments, the Court decided to dismiss the appeal on the ground that notice to the district surveyor was notice to the appellants, and that therefore they were not in time in taking their proceedings.

The other points were not dealt with.

## GENERAL.

**The Order of Leopold.**—The following artists have been nominated to the Belgian Order:—Commanders—M. Bossuet, painter; M. Clays, painter. Officer—M. Markelbach, painter. Chevaliers—MM. Ch. Brunin, sculptor; Carpentier, painter; Franz Courtens, painter; Felix Cogen, painter; Count Jacques de Lalaing, painter; and M. Serrure, architect.

**Mr. Gourlay Steell, R.S.A.**, has completed portraits of five of Her Majesty's favourite dogs. Some are executed in charcoal (which is fixed by the application of spray to the surface), and afterwards worked up in water-colours.

**Mr. Colin Hunter, A.R.A.**, has completed a picture of the Rapids above the Falls at Niagara, which will be exhibited next year at the Royal Academy.

**The Canadian National Portrait Gallery** has received thirty-two pictures from the South Kensington Art School, which are copies of works by the students.

**The Portrait of Jerome Holzschuler**, by Albert Dürer, which belonged to the Holzschuler family of Nuremberg, has been purchased for the Berlin Museum. The price paid for it was 1,250,000 frs.

**The Cambridge Fine Art Association** was inaugurated on Saturday with an exhibition of pictures, &c. The Society is intended to provide means of art culture in various branches, such as drawing, painting, engraving, etching, wood-carving, and art needlework. Equal facilities will be given to the academical student and the artisan.

**An Art Exhibition** with a fine collection of modern paintings and water-colours, and curious collections of all the reviews and papers which have been printed in Madrid since the Peninsular War, was opened in Madrid on Sunday.

**MM. Boussod-Valadon & Co.** will exhibit next week a collection of the works by M. Bougereau at their gallery, 116 and 117 New Bond Street. It will include *The Youth of Bacchus*, the work which was so nearly obtaining the medal in the Salon this year.

**The Central Hall** of the Corporation Galleries of Glasgow, which at present contains a collection of paintings lent by the Marquis of Bute, was illuminated with electric light for the first time on Saturday night.

**The King of Denmark** has offered a sum of 50,000 crowns (about 2,500*l.*) to the committee having charge of the decoration of the new Palace of Christiansbourg, which is to be reconstructed as soon as the necessary funds are voted by the Chambers.

**M. Bachmann** has been appointed Commissary-General of the Russian section of the Antwerp Exhibition in 1885.

**The Cecil Manuscripts**, which are preserved in Hatfield House, contain upwards of 30,000 documents, including State papers of various reigns, from Richard I., numerous illuminated MSS., theological treatises, rolls of genealogy, plans, charts, and voluminous correspondence between personages, some of them the most illustrious in English history.

**A Collection of Historical Documents** has been discovered under a beam in the triforium on the north-west side of the choir of Carlisle Cathedral. The papers are supposed to have been concealed prior to the siege of Carlisle under Leslie in 1645.

**The Mayor of Shrewsbury** has suggested that an exhibition of pictures and other works of art should be held in the old school buildings before they are opened for a museum and free library.

**A Mosaic** which has been placed in front of St. Jude's Church, Whitechapel, in recognition of the efforts made by the rector to hold art exhibitions in the East End, was unveiled on Saturday. It is a copy of Mr. Watts's *Time, Death, and Judgment*, and has been executed by Messrs. Salviati, Burke & Co.

**A New Church** is shortly to be built at Netley, upon a piece of ground overlooking the ruined Abbey, given by Colonel Crichton. Mr. Sedding is the architect.

**Mr. Arthur Ramsden** has been appointed surveyor to the Chiswick Local Board in succession to Mr. Strachan, who has accepted the Chelsea surveyorship.

**Mr. Ruskin** lectured on Saturday afternoon in the theatre of the University Museum at Oxford on birds. To prevent the overcrowding and crushing which have taken place at his previous lectures, Mr. Ruskin has issued instructions that in future only his pupils will have the privilege of bringing a friend.

**The Restoration** of the nave and nave aisles of All Saints Church, Maidstone, is to be proceeded with under Mr. Pearson, R.A. Some local builders and two or three London contractors are to tender for the work.

**A Music Room and Offices** are to be erected in the grounds of St. Mary's Cathedral, Edinburgh.

**Upleatham Church**, Yorkshire, is about to be re-seated and restored. The work has been entrusted to Messrs. Clark & Moscrop, architects, Darlington.

**A Maritime Canal** is to be constructed between Nantes and the Bay of Biscay. The cost is estimated at five millions of francs. The funds have been voted by the Council-General of the department.

**The Burgh Engineer** of Edinburgh recently examined 205 cisterns in the city. It was found that 89 were clean, 104 dirty, and 12 very dirty; 16 were provided with covers, 122 were without covers, and 7 were partially covered; 111 cistern waste-pipes discharged directly into the soil-pipe, 15 into the sink soil-pipe, and 6 into sinks; 29 were above the seal of water-closet traps, 11 discharged into roof-pipes, and only 24 discharged to the open air. In one case the drain gases were perceptibly escaping into the cistern.

**The Committee** for erecting the new church of St. Augustine, Highgate, have placed the work in the hands of Mr. John D. Sedding.

**An Anonymous Donor** has offered to give 15,000*l.* towards the rebuilding of the parish church of Portsea, if by next August a certificate is given him that an equal sum will be forthcoming by September 31, 1887. The cost of the work apart from the tower is estimated at about 30,000*l.*

**The Mersey Tunnel** was practically completed on Saturday last, as the last length of brickwork, 2 feet 6 inches in thickness, was laid. The permanent way has to be yet laid down. The tunnel runs from opposite the cathedral, in Church Street, Liverpool, to a point under Hamilton Street, Birkenhead, a distance of over two miles and a half, including the river tunnel.

**The Inhabitants of Harrow** are taking active steps to preserve Harrow Weald Common, its existence as an open space being threatened by the Highway Board, who are desirous of selling it for building purposes.

**Messrs. C. Isler & Co.** completed last week for some cement works at Grays, in Essex, an artesian bored tube well, 140 feet deep, and 7½ inches in diameter, yielding a supply of 9,000 gallons per hour through a pulsometer pump.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, DECEMBER 6, 1884.

### APPOINTMENTS VACANT.

**BEDWELTY.**—Dec. 10.—Applications are Invited for the Office of Surveyor. Mr. J. A. Shepard, Tredegar, Mon.

**HANLEY.**—Dec. 10.—The School Board are Desirous of Appointing an Architect to the Board. Mr. Alfred Smith, Clerk to the School Board, Hanley.

**HORSHAM.**—Dec. 11.—Applications are Invited for the Appointment of County Surveyor for the Western Division of Sussex. Mr. T. Bedford, Clerk to the Highways Committee, Horsham.

### COMPETITIONS OPEN.

**FALMOUTH.**—Dec. 24.—Plans are required for the Erection of Wesleyan Sunday School Premises, with Class-rooms, &c. Mr. F. L. Earle, Falmouth.

**KING'S NORTON.**—Jan. 15.—Plans for the Erection of Four Cottage Homes upon Lands situate at Shenley Fields are required. Mr. Ralph Docker, Clerk of King's Norton Union, Colmore Row, Birmingham.

**KING'S NORTON.**—Jan. 15.—Plans are invited for the Erection of a Laundry, at the Workhouse, Selly Oak. Mr. Ralph Docker, 57 Colmore Row, Birmingham.

**VENTNOR.**—Dec. 8.—Designs are invited for the Construction of an Iron Promenade Pier and Landing Stage. Mr. R. S. Scott, C.E., Surveyor to the Local Board, Ventnor, Isle of Wight.

### CONTRACTS OPEN.

**ABERLOUR.**—Dec. 9.—For Building Villa and Stable. Messrs. A. & W. Reid, Architects, Elgin.

**ABERSYCHYN.**—Dec. 10.—For Erection of Police Buildings. Messrs. James Seward & Thomas, Architects, St. John's Chambers, Cardiff.

**ADDINGTON.**—Dec. 11.—For Execution of Well-Sinking and Pumping Works. The Borough Engineer, 8 Katherine Street, Croydon.

**BALROTHERY.**—Dec. 8.—For Building Six Labourers' Cottages. Mr. James Stack, Board Room, Lusk, Co. Dublin.

**BELFAST.**—Dec. 9.—For Apartments at Infirmary. Mr. W. F. Boyce, Clerk to the Union, Workhouse, Belfast.

**BELFAST.**—Dec. 18.—For Heating Post Office. Mr. W. B. Soady, Secretary, Office of Public Works, Dublin.

**BETTSYCORD.**—Dec. 9.—For Additions to Glanaber Hotel. Mr. Richard Davies, Architect, Bangor.

**BELFAST.**—Dec. 15.—For Building Goods Shed, Donagall Quay. Mr. W. Currie, Harbour Office, Belfast.

**BIRKENHEAD.**—Dec. 11.—For Additions to late Oxtan Local Board Offices. Mr. T. C. Thorburn, C.E., Hamilton Square, Birkenhead.

**BLACKBURN.**—Dec. 8.—For Building Goods Offices, Extension of Stables, &c., Mill Hill. The Engineer's Office, Hunt's Bank, Manchester.

**BURNLEY.**—Dec. 10.—For Supplying Cast-iron Pipes. Mr. E. Filliter, C.E., 16 East Parade, Leeds.

**COVENTRY.**—Dec. 10.—For some Alterations at the Workhouse Hospital. Mr. W. W. Harris, Clerk to the Guardians, Coventry.

**DARLSTON.**—Dec. 18.—For Construction of Ten Miles or thereabouts of 18-inch, 15-inch, 12-inch, 10-inch, and 9-inch Earthenware and Cast-iron Pipe Sewers, and Construction of Engine and Boiler-house, Cottage, Tanks, Filter-beds, Drains, &c. Mr. Edward Pritchard, C.E., 2 Storey's Gate, Westminster, or 37 Waterloo Street, Birmingham.

**DURBAN.**—Dec. 15.—For Supply of Cast-iron Water Pipes (1,000 tons), &c. South African Mercantile Agency, 9 King William Street, E.C.

**DURHAM.**—For Building Church at Dipton. Messrs. Oliver & Leeson, Architects, Bank Chambers, Mosley Street, Newcastle-on-Tyne.

**ELY.**—For Building House. Mr. Walter Robinson, Architect, Forehill, Ely.

**FORDINGBRIDGE.**—Dec. 9.—For Building Lodge, Coach-house and Stabling. Mr. Fred Bath, Architect, 312 Strand, W.C.

**GRAVESEND.**—For Building Small House. Mr. A. G. Smith, Architect, 1 Darnley Street, Gravesend.

**HERTFORD.**—Dec. 19.—For Alterations to Assize Courts Shire Hall. Mr. Urban A. Smith, County Surveyor, Hertford.

**KENDAL.**—Dec. 10.—For Alterations to Wool Store. Mr. Stephen Shaw, Architect, Kendal.

**KINGSTHORPE.**—Dec. 8.—For Construction of One Mile of Brick Sewer with Manholes, &c. Mr. Wm. Hull, Architect, 12 St. Giles's Street, Northampton.

**KING'S NORTON.**—Dec. 16.—For Laying Sewers, King's Heath and Greenhill. Mr. Robert Godfrey, Surveyor, King's Heath.

**LONDON.**—Dec. 10.—For Completion of Infirmary, Harrow Road. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

**LEEDS.**—Dec. 16.—For Building Warehouse. Mr. Wm. Bakewell, Architect, 38 Park Square, Leeds.

**NORHAM.**—Dec. 15.—For the Supply and Erection of a Wrought-iron Bridge over the River Tweed. Mr. H. F. Sneyd-Kynnersley, Surveyor's Office, Moot Hall, Newcastle-on-Tyne.

**NEWCASTLE-ON-TYNE.**—Dec. 15.—For Constructing and Fitting-up Public Baths and Washhouses. Messrs. Gibson & Allan, Architects, 3 St. Nicholas' Buildings, Newcastle-on-Tyne.

**NEWRY.**—Dec. 10.—For Excavating Channel between Newry River and Carlingford Lough. Mr. J. Barton, C.E., Exchange Buildings, Dundalk.

**OPORTO.**—Dec. 15.—For Construction of Covered Market. Senor J. A. Correa de Barros, President of the Municipal Board of Oporto, Portugal.

**PORTSMOUTH.**—Dec. 13.—For Building Inland Revenue Office. H.M. Office of Works, 12 Whitehall Place, S.W.

**RYDAL.**—Dec. 6.—For Chancel to Church. Mr. Robert Walker, Architect, Windermere.

**SOUTHAMPTON.**—Dec. 15.—For Building Infant School, &c., and Additions to York Buildings Board School. Mr. E. T. Howell, Architect, 6 Portland Street, Southampton.

**SPITFAT.**—Dec. 8.—For Building Dwelling-house on Farm. Mr. Williams Brims, Architect, Wick.

**YORK.**—Dec. 22.—For the Construction of Flood Banks, Subsiding Reservoir, Filter Beds, &c., at Pumping Station, near Acomb Landing. Mr. C. Hornsey, Engineer, 16 Railway Street, York.

### TENDERS.

#### AUDENSHAW.

For Sewering and Draining Nelson Street, Audenshaw. Mr. J. BURTON, Surveyor, Warrington Street, Ashton-under-Lyne.

JONES & HILTON, Hooley Hill (accepted per schedule of prices).

Six Tenders were received.

#### BALBRIGGAN.

For Construction of Main Sewer (800 feet), Chapel Lane, Balbriggan, Balrothery.

Martley	£98	0	0
Percival	93	0	0
HEENERY (accepted)	75	0	0

#### BIRMINGHAM.

For Extension of Railway Viaduct for the Birmingham Gas Committee.

Piggott & Co. (accepted) £6,470 0 0

For Desks, Counters, and Fittings for the Large Office, Fittings for Strong Rooms, and Lift for Fitting Show-room, at Gas Offices, Birmingham.

BARNLEY & SONS (accepted) £1,736 10 0

Electric Bells.

SADLER (accepted) £5 15 0

#### BUCKIE.

For Erection of Part of Block of Buildings, at Nether Buckie, for Sir R. Glendourwyn Gordon, Bart. Messrs. BRUCE & SUTHERLAND, Architects, Buckie, N.B.

Milne, mason	£479	10	0
Mitchell, carpenter	440	0	0
G. & W. Sutherland, plasterer	112	0	0
Rathie, plumber	65	15	0
Barclay, slater	57	9	0

#### CHAGFORD.

For Dwelling-house and Offices at Chagford, for Mr. A. H. Unwin. Messrs. J. W. ROWELL & SON, Architects, Newton Abbot and Torquay.

Gooding, Exeter	£2,480	0	0
Holmes, Exeter	2,230	0	0
Gibson, Exeter	2,050	0	0
Stone, Chagford	1,680	0	0
Aggett & Underhill, Chagford	1,666	0	0
Collins & Ellis, Chagford	1,558	0	0
BRIMBLECOMBE & ELLIS, Chagford (accepted)	1,551	0	0
Bresley, Torquay	1,410	0	0

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**CANTERBURY.**

For Construction of the Elham Valley Railway.  
Walker & Sons . . . . . £1,200,000 0 0

**CARLOW.**

For Town Hall and Market Place, Carlow. Mr. Wm. HAGUE, Architect, Dublin. Quantities by Mr. Fredk. Morley, Commercial Buildings, Dublin.

Nolan, Monahan . . . . .	£3,740 0 0
Pemberton & Son, Dublin . . . . .	3,303 0 0
Dodd, Beckett & Co., Dublin . . . . .	3,220 0 0
Brady, Bray . . . . .	3,168 3 0
T. & J. Pemberton, Dublin . . . . .	2,898 0 0
Crampton, Dublin . . . . .	2,853 0 0
Tighe & Son, Dublin . . . . .	2,790 0 0
Redmond, Wexford . . . . .	2,681 8 9
Carbury, Athy . . . . .	2,550 0 0
Robinson, Carlow . . . . .	2,488 0 0
CONNOLLY & SON, Dublin (accepted) . . . . .	2,327 0 0
Breslin Bros., Dublin . . . . .	2,300 0 0

**DENHOLME CLOUGH.**

For Alterations to Chapel, Denholme Clough. Mr. HERBERT HODGSON, Architect, Queensbury. Quantities by the Architect.

*Accepted Tenders.*

Hird, carpenter and joiner . . . . .	} £213 11 7
Charnock, plasterer . . . . .	
Stocks, plumber . . . . .	
Hodgson, painter . . . . .	

**DERBY.**

For Erection of Wesleyan Chapel, Ashbourne Road, Derby. Mr. JOHN WILLS, Architect, Derby. Quantities by Mr. Robey E. Carpenter, Horninglow Street, Burton-on-Trent.

Fletcher . . . . .	£4,504 0 0
Wood . . . . .	3,900 0 0
Porter . . . . .	3,960 0 0
Bakewell . . . . .	3,850 0 0
Wood . . . . .	3,831 0 0
WALKER & SLATER (accepted) . . . . .	3,595 0 0

**DUDLEY.**

For Gas-piping and Fittings at Workhouse School, Dudley. Gas Company, Dudley . . . . . £160 0 0  
Guest, Dudley . . . . . 160 0 0  
Fryer, Dudley . . . . . 139 0 0  
WORRAL, Wolverhampton (accepted) . . . . . 110 0 0

**FRODSHAM.**

For Erection of Wesleyan Chapel, Five Crosses, Frodsham. Mr. JOHN WILLS, Architect, Derby. Quantities by Mr. Robey E. Carpenter, Horninglow Street, Burton-on-Trent.

LITTLE (accepted) . . . . . £1,400 0 0

**GREENWICH.**

For Constructing Wrought-iron Girder Bridge over the River Ravensbourne, opposite Albion Street, Cold Bath, Greenwich.

APPLEBY BROS. (accepted) . . . . . £1,790 0 0

For Paving in Hatfield Street, Deptford. WOODHAMS & FRV (accepted) . . . . . £258 0 0

For Gas and Hot-water Fittings for new Buildings at Workhouse, Greenwich.

Gretton & Co., London . . . . .	£660 0 0
Holloway, London . . . . .	607 0 0
Mott, Deptford . . . . .	601 9 10
Stidder & Co., London . . . . .	525 0 0
May, London . . . . .	510 0 0
Godfree, London . . . . .	505 11 0
Parr, Deptford . . . . .	489 13 0
Strode, London . . . . .	465 0 0
Cannon, London . . . . .	439 0 0
Rosser, London . . . . .	422 9 0
Pennycook & Co., London . . . . .	404 10 0
Wright, London . . . . .	397 8 0
Thompson, Rawdon, near Leeds . . . . .	364 8 10

**HARROW.**

For Alterations and Additions at Green Hill Farm, Harrow. Mr. E. TYLER, Architect. Quantities by Mr. W. Barnett.

Rider & Son . . . . .	£2,900 0 0
Stimpson & Co. . . . .	2,886 0 0
Chappell . . . . .	2,860 0 0
Laurance . . . . .	2,792 0 0
Richardson . . . . .	2,659 0 0
Shurmur . . . . .	2,484 0 0

**HUDDERSFIELD.**

For Building Junior Department at the Oakes Schools, Lindley, for the Huddersfield School Board. Mr. B. BROOKS, Architect, Huddersfield. Quantities by the Architect.

Bates, Lindley, mason . . . . .	£1,985 0 0
Stott, Lindley, joiner . . . . .	1,088 0 0
Garton, Huddersfield, plumber . . . . .	448 15 0
Pickles Bros., Huddersfield, slater . . . . .	289 18 0
Royston & Noble, Lindley, plasterer . . . . .	109 10 0
Earnshaw Bros., Lindley, painter . . . . .	63 0 0
Heaps & Co., Huddersfield, heating . . . . .	399 15 0

Total . . . . . £4,383 18 0

**LOFTUS.**

For Portion of Third Section of Main Outfall Sewer, Loftus. Mr. C. A. COPLAND, Surveyor.

Collins, Loftus . . . . .	£261 12 6
Gladstone, Brothton . . . . .	245 16 6
France, Middlesbrough . . . . .	197 10 0
Walker & Dickinson, Saltburn . . . . .	190 7 0
HERBERT & MOORE, East Loftus (accepted) . . . . .	183 0 0

**LONDON.**

For Pewterers' Work at the Royal Standard, York Road, Battersea, for Messrs. Sansom & Ewington. Mr. H. I. NEWTON, Architect, 17 Queen Anne's Gate.

Heath . . . . .	£133 0 0
Davidson . . . . .	125 10 0
KEMBLE (accepted) . . . . .	117 0 0

For Alterations to the Ranelagh Arms, Old Ford Road, for Mr. N. Argent. Mr. EDWD. BROWN, Surveyor, Hanbury Street, Spitalfields.

Salt . . . . .	£495 0 0
Kiddle & Sons . . . . .	495 0 0
Hughes . . . . .	430 0 0
Marr . . . . .	405 0 0
HAWKINGS (accepted) . . . . .	379 0 0
Smith . . . . .	342 10 9

For Erection of Two Houses in Pemberton Gardens, St John's Park, Upper Holloway. Mr. MARSHALL N. INMAN, Architect, 7 Bedford Row, W.C.

	One House.	Two.
Sayers . . . . .	£993 0 0	£1,888 0 0
Homer . . . . .	836 0 0	—
Pearce . . . . .	775 0 0	—
Stephenson . . . . .	760 0 0	1,431 0 0
STEPHENSON & PRICE (accepted) . . . . .	750 0 0	1,370 0 0

For Erecting the Shipwrights' Arms, Bermondsey. Mr. G. TRACHER, Architect

Harber Bros. . . . .	£2,973 0 0
Shurmur . . . . .	2,941 0 0
Hill . . . . .	2,909 0 0
Canning & Mullins . . . . .	2,890 0 0
Beale . . . . .	2,793 0 0
Pritchard . . . . .	2,695 0 0
Jackson & Todd . . . . .	2,684 0 0
Parker . . . . .	2,479 0 9

For Stables, &c., at Laburnham Street, Kingsland. Mr. G. SMITH, Architect.

Chessum . . . . .	£1,542 0 0
Hayworth . . . . .	1,374 0 0
Allard . . . . .	1,300 0 0
Forest . . . . .	1,287 0 0
Stimpson & Co. . . . .	1,249 0 0
Boyce . . . . .	1,245 0 0
Shurmur . . . . .	1,179 0 0

For Fitting up the new Wing of the Chelsea Infirmary, Call Street, Chelsea, with Hot-water Warming and Supply Apparatus, &c., for the Guardians of St. Luke's, Chelsea. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C. Quantities not supplied.

Pennycook & Co. . . . .	£548 3 0
Clark, Bennett & Co. . . . .	500 0 0
Cannon . . . . .	498 10 0
Fraser & Co. . . . .	475 0 0
J. & F. May . . . . .	447 0 0
Strode & Co. . . . .	430 0 0
Crane . . . . .	427 0 0
Clements, Jeakes & Co. . . . .	426 13 0
Knight . . . . .	407 17 0
Goddard & Massey . . . . .	398 5 6
Kennell & Co. . . . .	360 0 0
BRADFORD & Co. (accepted) . . . . .	296 14 0
Architects' estimate . . . . .	500 0 0

For Construction of a Line of Sewer, with Branches along the Holloway Road and other Roads to Amhurst Road, Hackney.

Pearson & Son . . . . .	£117,300 0 0
Temple & Graham . . . . .	109,774 0 0
Ford & Everitt . . . . .	105,925 0 0
Felton . . . . .	99,181 0 0
Killingback . . . . .	96,590 0 0
McCrae & McFarland . . . . .	95,505 0 0
Cooke & Co. . . . .	93,000 0 0
Williams, Son, & Wallington . . . . .	90,300 0 0
Webster . . . . .	87,523 0 0
Kellett & Bentley . . . . .	85,000 0 0
Nowell & Robson . . . . .	84,000 0 0
Mowlem & Co. . . . .	81,990 0 0
Adams . . . . .	81,000 0 0
RIGBY (accepted) . . . . .	78,500 0 0
Hill & Co. . . . .	72,839 1 6

For Erection of Proposed Artisans' Dwellings, situated at Chatham Gardens and Nile Street, City Road, for the Joint Estate Trustees of the Joint Parochial Charities of St. Giles Without, Cripplegate, and St. Luke's, Middlesex. Messrs. WOODTHORPE & HAMMOND, Architects. Quantities supplied by Messrs. Franklin & Andrews.

Dove Bros. . . . .	£53,750 0 0
Shaw . . . . .	52,607 0 0
Holland & Hannen . . . . .	51,745 0 0
Rider & Son . . . . .	50,488 0 0
Shurmur . . . . .	49,988 0 0
Larke & Son . . . . .	49,700 0 0
Colls & Sons . . . . .	49,637 0 0
Martin, Wells & Co. . . . .	49,190 0 0
Mowlem & Co. . . . .	48,438 0 0
Ashby & Horner . . . . .	47,300 0 0
L. H. & R. Roberts . . . . .	47,043 0 0
Conder . . . . .	47,018 0 0
Chappell . . . . .	46,976 0 0
Brass . . . . .	46,777 0 0
Kirk & Randall . . . . .	46,728 0 0
Ashby Bros. . . . .	46,200 0 0
Lawrence & Sons . . . . .	45,204 0 0

For Heating Racquet Court, Hewell Grange, Bromsgrove, and St. Joseph's Convent Chapel, Dublin. J. L. BACON & Co., London (accepted).

**MOSELEY.**

For Building House at Moseley, Worcestershire, for Mr. Walter Clarke. Mr. T. W. F. NEWTON, Architect, 7 Waterloo Street, Birmingham. Quantities by Mr. Henry Clere, 17 Bennett's Hill.

Barker & Sons . . . . .	£2,689 0 0
Briley . . . . .	2,664 0 0
Sapcote & Sons . . . . .	2,597 0 0
Rowbotham . . . . .	2,559 0 0
BOWER (accepted) . . . . .	2,497 0 0

**OTTERY ST. MARY.**

For Construction of Reservoir, Ottery St. Mary. CARNELL (accepted) . . . . . £1,033 0 0

**PLUMSTEAD.**

For Additions and Alterations to Relief Station, Horsley Park, Plumstead. Mr. JOHN OLIVER COOK, Architect.

Fenn & Sons, Woolwich . . . . .	£212 7 0
Proctor, Woolwich . . . . .	200 0 0
Bull, Charlton . . . . .	198 0 0
Forsdike, Plumstead . . . . .	165 0 0
Wright, Woolwich . . . . .	148 15 0
Smith, Woolwich . . . . .	147 0 0
Lester, Deptford . . . . .	125 15 0

**PLYMOUTH.**

For Constructing Pipe Sewer, Tothill Lane, Plymouth. Mr. G. D. BELLAMY, Borough Engineer.

*Contract No. 1.—Stoneware Pipes.*

Parsons & Son, Plymouth . . . . .	£406 0 0
Pipe, Devonport . . . . .	389 12 0
Finch & Son, Plymouth . . . . .	384 10 0
Wilcocks, Plymouth . . . . .	380 0 0
Smith, Devonport . . . . .	297 15 0
Shellabear, Plymouth . . . . .	290 0 0
SHADDOCK BROS., Plymouth (accepted) . . . . .	266 0 0

*Concrete Tubes and Bedding.*

Pipe . . . . .	598 0 0
Parsons & Son . . . . .	486 13 8
Finch & Son . . . . .	484 10 0
Smith . . . . .	425 0 0
Shellabear . . . . .	352 0 0
Shaddock Bros . . . . .	323 0 0

*Contract No. 2.—Stoneware Pipes.*

Parsons & Son . . . . .	103 10 0
Shellabear . . . . .	99 10 0
Pipe . . . . .	99 0 0
Finch & Son . . . . .	96 0 0
Wilcocks . . . . .	89 0 0
Smith . . . . .	77 15 0
SHADDOCK BROS. (accepted) . . . . .	61 0 0

*Concrete Tubes, &c.*

Pipe . . . . .	149 15 0
Finch & Son . . . . .	120 0 0
Parsons & Son . . . . .	115 10 0
Shellabear . . . . .	114 10 0
Smith . . . . .	104 15 0
Shaddock Bros. . . . .	73 0 0

**PLYMPTON ST. MARY.**

For Building Parsonage House, Plympton St. Mary, for the Rev. J. Mercer Cox. Messrs. J. W. ROWELL & SON, Architects, Newton Abbot and Torquay. Quantities by Mr. Rickard, Torquay.

Laphorne & Goad, Plymouth . . . . .	£2,123 0 0
Kenting, Plympton . . . . .	2,059 0 0
Berry, Plymouth . . . . .	2,032 0 0
Clarke, Plymouth . . . . .	1,983 0 0
Trevana, Plymouth . . . . .	1,979 0 0
Pethick Bros., Plymouth . . . . .	1,964 0 0
Lethbridge, Plymouth . . . . .	1,890 0 0
Finch & Son, Plymouth . . . . .	1,875 0 0
Dart, Plymouth . . . . .	1,856 0 0
Pearse, Modbury . . . . .	1,759 0 0
Stevenson & Son, Newton Ferrers . . . . .	1,750 0 0
Vanstone & Mumford, Torquay . . . . .	1,709 0 0
Shellabear, Plymouth . . . . .	1,700 0 0
Reed, Plymouth . . . . .	1,698 0 0
BLOWEY, Plymouth (accepted) . . . . .	1,686 0 0

**QUEENSBURY.**

For Building Two Houses at Queensbury, York. Mr. HERBERT HODGSON, Architect, Queensbury. Quantities by the Architect.

*Accepted Tenders.*

Balmforth & Reese, mason . . . . .	} £469 19 0
Ackroyd, joiner . . . . .	
Taylor, slater . . . . .	
Dean, plasterer . . . . .	
Haigh & Slater, plumber and glazier . . . . .	
Hodgson, painter . . . . .	

**SHERSTON.**

For Erection of new House, &c., Ladyswood, Sherston, Wilts, for Sir Thomas Dancer, Bart. Mr. W. RAVENSCROFT, Architect, Reading. Quantities supplied by Messrs. Cooper & Sons, Reading and Maidenhead.

General Work, including Deal Dado in Hall and Vestibule.

Searle, Reading . . . . .	£5,911 0 0
Rider & Son, London . . . . .	5,618 0 0
Higgs, Goring . . . . .	5,553 0 0
Smith & Light, Chippenham (received too late) . . . . .	5,410 0 0
Barrett, Swindon . . . . .	5,118 12 0
Margetts, Reading . . . . .	5,109 0 0
BROCK & BRUCE, Bristol (accepted) . . . . .	5,099 0 0

\* Accepted subject to a few modifications.

If Hall, Vestibule, best Staircase, best Landing, First Floor and best Corridor, First Floor, including Dado and Floors are finished in dull Polish Oak, add.

Rider & Son . . . . .	£550 0 0
Searle . . . . .	445 15 0
Smith & Light . . . . .	436 0 0
Brock & Bruce . . . . .	372 0 0
Margetts . . . . .	319 15 2
Higgs . . . . .	290 0 0
Barrett . . . . .	233 18 8

If General Work is executed without Deal Dado in Hall and Vestibule, deduct from general amount.

Searle . . . . .	£130 0 0
Higgs . . . . .	52 15 7
Rider & Son . . . . .	30 0 0
Margetts . . . . .	28 15 7
Smith & Light . . . . .	22 0 0
Brock & Bruce . . . . .	22 0 0
Barrett . . . . .	21 7 4

**SOUTHAMPTON.**

For Building Offices on the Town Quay, Southampton Harbour. GREEN & BURLEIGH (accepted) . . . . . £315 0 0



ROCHESTER.

For Constructing (Section No. 1) of Esplanade Pier at Stood, Rochester.

Godfrey . . . . .	£3,208 5 2
Hart . . . . .	3,201 11 5
Gates, Frindsbury . . . . .	2,859 0 0
Doherty . . . . .	2,600 0 0
Nye, Rochester . . . . .	2,455 0 0
Honey & Nye, Gillingham . . . . .	2,382 0 0
Beadle . . . . .	2,188 0 0
Beckthall . . . . .	2,147 10 3
Dixon . . . . .	2,120 0 0
Ball . . . . .	2,085 0 0
Hocking . . . . .	2,083 11 0
Trueman . . . . .	1,998 0 0
KELLET & BENTLEY (accepted) . . . . .	1,930 0 0

RYCROFT.

For Laying Gas Main and Service Pipes, Rycroft, Rawmarsh.

Boal, Rawmarsh . . . . .	£48 0 0
Ward, Rotherham . . . . .	35 0 0
Morton, Rawmarsh . . . . .	33 10 0
INGLE, Rawmarsh (accepted) . . . . .	32 10 0

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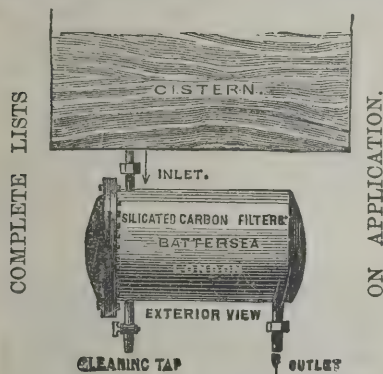
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For Alexandra Road Works, Southgate. Mr. C. GRIFFIN  
LAWSON, Surveyor.

Victoria Stone Company, London . . . . .	£707 0 0
Blomfield, Tottenham . . . . .	695 0 0
Pizzey, Hornsey . . . . .	679 0 0
Jackson & Son, London . . . . .	671 0 0
Bell, Tottenham Wharf . . . . .	648 0 0
Shillabeer . . . . .	591 0 0
NICHOLLS, Wood Green (accepted) . . . . .	573 0 0

SOUTHPORT.

For Supply of Glazed Fireclay or Stoneware Socket jointed  
Drain Pipes, Syphon Traps, Dish Frames, &c., South-  
port

Skey & Co, Wilncote . . . . .	£1,736 6 0
Insham & Sons, Wortley . . . . .	1,708 10 0
Holt & Co., Littleborough . . . . .	1,697 17 0
Brooks & Pickup, Fownley . . . . .	1,693 11 0
Entwistle & Co., Darwen . . . . .	1,582 15 0
Kitson, Denby Dale . . . . .	1,450 10 0
Doulton & Co., Liverpool . . . . .	1,443 2 0
Tetlow, Littleborough . . . . .	1,365 1 0
PLACE & SONS, Huddlesden (accepted) . . . . .	1,364 12 0

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WESTWOOD GROUND, BOX GROUND  
COMBE DOWN  
CORSHAM DOWN, AND FARLEIGH DOWN.  
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BATH STONE MERCHANTS,  
Supply direct from their own Quarries,  
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200,000 cubic ft. of SUMMER-DRIED  
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WARM-AIR  
VENTILATING FIRE GRATE.

The novelty, superiority, and advantage of this patent  
consist in the heating surface being greater than any  
other Fire-grate introduced to the public. It is very  
simple in construction, and is made in the form of a Stove,  
the back of which is semicircular in shape, with gills  
behind and smoke-nozzle on top, all cast in one piece.  
The same can be attached to any design of a Register or  
Stove front. It is very suitable for schools, class-rooms,  
waiting-rooms, hospitals, offices, dormitories, and dwelling-  
houses, from the cottage to the mansion. Design and  
specification post free on application.

TESTIMONIALS.  
"9 Victoria Chambers, Westminster, S.W."  
"June 10, 1884."  
"SIR,—I have much pleasure in testifying to the  
efficiency of your patent Warm-Air Fire Grate. It has  
been very successful, and given every satisfaction where I  
have used it."  
"Yours, &c."  
"JAMES WEIR, F.R.I.B.A."

"To Mr. Grundy."  
"Baptist Chapel, Clapham Common, London. Richard  
Webb, Pastor, 10 Grafton Square."  
"February 15, 1884."  
"DEAR MR. GRUNDY,—I have pleasure in testifying to the  
excellency and efficiency of your patent Fire-Grate. It is  
the most charming invention for heating a large room I  
have ever known. I shall have pleasure in showing it to  
anyone who wish to have their schools or rooms pleasantly  
and efficiently heated."

From James Garry, Esq., Architect, West Hartlepool,  
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# The Architect.

## AN IMPROVEMENT IN THE LAW OF ANCIENT LIGHTS.



It is quite unnecessary to remind the readers of an architectural journal that the administration of the law of easements of light is a question which is constantly pressing hard upon all those who are concerned in building operations in large towns, and especially, of course, in the metropolis. Any new doctrine, therefore, which makes its appearance in the practice of the Courts of Law becomes an important subject for the consideration of architects. How it is that such new doctrines arise and acquire force it

may not be easy for outsiders to discover technically; but, speaking broadly, what seems to take place is that the principles of liberal common sense in this, as in other matters, gain ground by slow steps on every hand against the prejudices in favour of the conservation of privilege which have so strong a hold upon English law, and that occasionally this gradual progress advances by a perceptible jump. Accordingly, architects will be glad to know that in the Courts of the Chancery Division there appears to be just now a decided inclination to avoid the issue of injunctions for stopping the progress of their buildings, and to decree that money damages shall be accepted instead. We need scarcely observe that every advance in this direction will be welcomed by the architectural profession with the utmost satisfaction.

The law of ancient lights, as so many architects know to their cost, goes primarily to this; that an old window shall not have its means of lighting interfered with by a new building. In language a little more technical, when a window has for twenty years had an easement of light over a neighbouring property, the owner of that neighbouring property shall not build upon it to any such extent as to interfere with the easement. It is nothing that this privilege of receiving light has been acquired without purchase or permission of any kind; it is enough to show that it has been enjoyed for twenty years, in order to evoke all the terrors of the law for its perpetual protection; and, so far, cost what it may to the neighbouring proprietor, either in inconvenience or in loss of profit, the dog in the manger who owns the old window—perhaps a very trumpety old window after all—may defy him to add one cubit to the stature of his house, or, theoretically, even to put a pot upon his chimney. The obvious absurdity to which this principle of conservatism may be so readily pushed has always been acknowledged, and a certain vague relief has been devised in the introduction of the idea that immaterial or unsubstantial damage, although in theory it may be tangible enough as a legal grievance, cannot in practice be considered worthy of the serious attention of the Court; and a plaintiff has therefore been required to show that the obstruction of his ancient light is a “material” interference with the beneficial use of his premises. This is apparently a great gain in the direction of common sense; but, inasmuch as the phrase “material” cannot be fixed to any definite meaning, the recognition of the grievance comes to be a matter of opinion after all, so that when plaintiff and defendant have thoroughly agreed upon the facts, it is still contended by the one that the result is material and by the other that it is not, so that the judge must determine between them as he best can. Scientifically regarded, this is most unsatisfactory; and we may add, as the universal opinion of the building community, that architecturally it is ruinous. In carrying out, that is to say, the absolutely necessary improvement of house property in English towns, no architect can discover by any means where he ought to stop in enlarging the bulk of his building; or, in plain words, at what point he may expect to be safe against the attempts of neighbours to levy black mail upon his client, on the pretence of protecting ancient lights, by applying to the Court for injunctions to mutilate the building. It has to be explained, further, that the only deterrent influence which comes in aid of the defence is the risk, seldom a serious one, of a plaintiff having law costs to

pay if he fails in his suit; whilst, on the other hand, the chance of mutilation to the new building has attached to it the sometimes greater hazard of the defendant having to pay the costs of any number of assaults that may happen to be delivered against him upon speculation. Of the buying off of injunctions nothing need be said but *Vae victis!*

We may take leave to understand that in all cases the tendency of reform in litigation is in the direction of an escape from the hardships which naturally arise out of the undue application of abstract principles of right. In cases of equity more particularly, good sense may be said to be more and more modifying the operation of rule. Therefore, when we have to do with a principle so extremely exacting as the elementary idea of the protection of ancient lights—their maintenance in identity *coute que coute*—it can only be a question of time in these days when the vital energy of progress shall overcome the *vis inertiae* of conservation; and the form which this victory must necessarily take seems to be the substitution of some kind of compensation for the prohibitive injunction. There are two ways in which this may be done. On the one hand, the value of the easement may be restored by some convenient alteration of the old window; on the other hand, an equivalent may be awarded by way of recompense for loss. In either case, of course, a court of law will make it a matter of what is called money damages.

By a statute known as Lord CAIRNS'S Act, of no very old date, it was enacted that in a case of this kind the judge should have a discretionary power to award money damages instead of granting an injunction, provided he felt satisfied, first, that an injunction ought in strict equity to issue; and, secondly, that if issued it would do more harm on one side than good on the other. This Act has been repealed in adjusting the still more recent changes which have been made in the system of litigation, but another enactment takes its place which has so far the same effect; and it is under this new statute that the Court seems now to see its way to go much farther than hitherto in the refusal of oppressive injunctions to restrain building. Within the present week Mr. Justice PEARSON—to whose Court these cases seem now to be chiefly allotted—has given a decision in this direction for which every architect in the kingdom will thank him heartily. We may simply say that the case is one in which a lofty house is being built in the well-known thoroughfare of Jermyn Street, and that the attempt of an opposite shopkeeper to cut down the front to something like the old low level has been, after very careful consideration, defeated on the principle we have referred to, an injunction being refused and money damages awarded. The evidence given by Professor KERR for the defence seems worth quoting: the appreciable extent of the injury, he said, no one could deny; and, although the plaintiff would practically never be a penny the worse, he ought to receive, in accordance with custom, a moderate money compensation—“to buy him off,” as the judge said, by way of helping the witness to explain himself. How many cases there have been in which the plaintiff would practically suffer no loss, and has yet been able to prohibit the erection of his neighbour's building, it is not necessary to say. And how many cases there have been in which the prohibition thus obtained has been, to speak plainly, *sold* by the plaintiff at an exorbitant price, it might be still more undesirable to suggest.

There can be no doubt that this amelioration of the rigour of the law—for the too well-known Prescription Act is still in force—will steadily advance, until that terror of architects, the “light and air case,” will practically almost always take the form of an amicable reference to one or more architects to assess the money value of an acknowledged damage. One of the next steps may already be the discovery of a principle upon which a plaintiff whose money damages do not happen to run up very high may be left by the Court to pay his own costs, or possibly, if the cards be played well against him, the costs of the defendant as well—which would be a shocking misadventure.

Those architects who have been agitating of late years for a change in the law of ancient lights may now see the force of what was pointed out to them when they first started on their enterprise, namely, that the improvement of the practice of the Courts is the only form which such a change can really take. To obtain a repeal of the Prescription Act, anyone experienced in the matter can see is virtually impossible, even in principle; but to put a reasonable construction upon it is easy, and to do so must chiefly be the work of architects in the



witness-box. It ought to be borne in mind that professional union in the cause of liberal good-sense is one of the most powerful influences exhibited in modern society. The profession of architects may not have done so much in this way during the last few years, but the time is within the memory of many when, under such leaders as Professor DONALDSON and Sir WILLIAM TITE, a good deal used to be done. In the matter now under review, we have no doubt that a little intelligent co-operation might speedily effect all that the reformers desire, and we may congratulate them upon the practical sympathy of Mr. Justice PEARSON.

### ALAS, POOR STEVENS!

BY LEWIS F. DAY.

THE question of the decoration of St. Paul's has been discussed at some length, if to little purpose, at the Institute; but it can scarcely be said that ALFRED STEVENS's design was subjected to discussion. Generally speaking, it was ignored by the gentlemen who favoured the meeting with their schemes. Occasionally it was referred to, only to be contemptuously dismissed, the one full-fledged Academician who took part in the discussion expressing his hope, in terms almost identical with those of the judge who condemns a capital offender, that the objectionable design might be removed to the obscurity from whence it came, &c. &c.

Mr. AITCHISON, alone amidst Fellows and Associates, spoke with the appreciation of STEVENS which one might have expected from him. It was he also who pointed out that if the services of artists of the calibre of Sir FREDERICK LEIGHTON and Mr. POYNTER are to be obtained, they will have to be consulted as to what shall be done, and their judgment allowed to rule. The solitary member of the Decoration Committee present on the occasion of the adjourned discussion spoke indeed in favour of STEVENS, but his purpose in so doing soon became apparent. He raised him for a moment upon a pedestal only that he might the more easily knock him down—a device not altogether unfamiliar in Parliamentary speech-making. But the opinion of the hon. member is not likely to be taken very seriously by anyone. He himself confessed to the meeting that he was not a man of taste, and, what is more, he did not believe in taste. What was it? It was only a matter of opinion after all. And yet Mr. CAVENDISH BENTINCK is a member of the Decoration Committee, and has power to pooh-pooh an ALFRED STEVENS.

It was curious to observe how the "discussion" resolved itself into an exposition of the rival schemes of the various speakers. There was a general eagerness to show how much better the speaker could have done if the doing had been left to him. One or two had even the temerity to put their schemes on paper, and submit them to the judgment of the meeting. They were pretty much what one might have expected from men who dared to rush into competition with STEVENS. That they were hastily prepared does not excuse them. STEVENS's own design remains quite in the rough. And a fortnight, or ten minutes for that matter, is enough to show whether one has a notion of design or a sense of colour. What would BOTTICELLI have said of the design done after him?

Those who confined themselves to words were wiser in their generation. One may rhapsodise about cherubim and seraphim, and all the hosts of heaven, without much harm. The hearer is carried away by the vision that is called up, or smiles to himself, according to the manner of man he is. The human mind is satisfied with the vaguest of pictures, and it is quite possible to think of the glory of heaven without seeing how that idea is to be embodied in the decoration of a dome. Needless to say that it is far easier to indulge in quasi-poetic descriptions as to what the vault should contain than to show how the angelic hierarchies are to be designed, except in zones, which detract from the apparent height of a dome, or in such picturesque confusion as probably no architect would advocate.

There was some indication in the discussion of the difficulty which besets the question of the decoration of our metropolitan cathedral in the divergence of religious opinion existing within the body of the English Church. There is no possible scheme of figure decoration which would satisfy alike those members of the Church of England who call themselves Catholics and

those who glory in the title of Protestant. That is a fact which might be brought forward as an argument against the introduction of figure work in any shape into the decoration of St. Paul's.

The other objection, urged with some show of reason by more than one speaker—viz. that the scale to which it would be necessary to enlarge the figures in order that they should be seen would be quite out of proportion with the architecture—is not so serious as may at first appear. It is true that the eye is accustomed to due dimensions of the human figure, and, more or less unconsciously, uses it as a standard. But it is not *only* the human figure with which the eye is familiar and by which it unconsciously makes its measurement. We are equally accustomed to a certain scale in the more ornamental details of mouldings, capitals, and so on. An immense acanthus leaf would, as certainly as a gigantic human figure, to some extent lead astray the beholder's estimate of the actual size of the vault. The very features of the building do this. How many of the sightseers who look up into the dome of St. Paul's have any conception of the magnitude of the windows beneath it? They are so accustomed to windows of much smaller area that they can with difficulty be brought to believe that these are so many times larger than they look to them; and yet, for all that, the dome itself appears vast enough for one and all. It is easy to say that this or that would destroy its vastness, but I doubt it would be very difficult actually to do that; and, indeed, a certain difference between the scale of the details of distant decoration and the size they would appear if represented strictly according to natural proportions adds probably to that mystery of effect which constitutes the poetry of architecture. We are somewhat over-prosaic in our demands in this respect.

It was quite in keeping with the tone of the debate that STEVENS's model should, on the occasion of the discussion, have been shifted from the place it occupied on the night of Mr. STANNUS's paper to the opposite corner of the room, where the backs of the assembly were turned to it throughout the evening. With a solitary exception no one, it seems, wanted to refer to it. Yet Mr. STEVENS's model was the one attractive feature of the meeting.

We have had before us for some time now Mr. POYNTER's idea of STEVENS, and Mr. STANNUS's idea of STEVENS, and it was high time that we had before us at last STEVENS's version of STEVENS. Truly they have kept the good wine till the last! Whatever one's prejudices one must admit that it is a grand design. If the artist had lived to carry it out (supposing for a moment that the powers that be would ever have permitted the execution of anything worth executing) we should have had a work of decoration, not perhaps by any means free from fault (was ever anything above mediocrity faultless?), but certainly worth having—a grander work than has been done, or is likely to be done, in our generation.

The meeting at the Institute was a most depressing experience. We were told, with all the characteristic and patriotic fervour of an after-dinner speech, that WREN was the greatest genius that ever lived. There was something to be said even for Sir JAMES THORNHILL; but STEVENS was worthy only to be scolded, or at best to be ignored. Alas, poor STEVENS! Poor anyone who is concerned in our day in any such scheme as the decoration of St. Paul's! Think of the conditions under which he needs must work! In the multitude of counsellors there is, proverbially, wisdom; but the multitude of cooks do not, according to the proverb, assure good broth. In the present instance the cooks are not all artists, and there is every chance of their dishing up a hash, harmless perhaps but flavourless—and, well, *not* equal to the famous *fricassée* of CORREGGIO.

The conditions under which a modern work of any magnitude is undertaken are not such as are likely to result in anything like a great work. Inspired by a committee of taste (and we may take it that the taste of a committee even the most select, must be of the "composite" order), overshadowed if not overawed by the authority of a Royal Institute, criticised on the one side by architects and on the other by painters, and barked at by the press all round, is it possible, not to say likely, that a man will give us the best that is in him to do?

The kind of man who will submit himself, lowly and reverently, to the dictation of a committee, is the kind of man to whom a great work should on no account be entrusted. We may all have our notions as to what is the best way of decorating the dome of St. Paul's, and we may be right or



wrong. But different as our notions may be, we ought all to be able to recognise this : that it must be the idea of the man who is to do the work that must prevail. Every great artist succeeds in showing us that what we thought wrong is right enough *as he does it*. The design of ALFRED STEVENS offends many of my own private prejudices, but I am more than content to take it on its merits as the only attempted solution of the difficulty that is in the least adequate to the occasion. Let those who can produce something better throw stones if they like. It appears there are plenty such ; but they are an unknown quantity. There is significance in the circumstance that such men as Mr. CLAYTON, who was present the other night, did not take part in the discussion.

Mr. CAVENDISH BENTINCK offered us the very comfortable counsel that we should let things alone, and wait for something to turn up. One would have thought that now was the time when occasion offered. We have a fine design, and, what is almost rarer, we have competent men who sympathise sufficiently with that design to take it up *con amore*, and at some personal sacrifice (as Mr. ARCHERSON pointed out) devote themselves to the work. In these days, when architects are not painters, nor painters architects, it may be desirable to some extent to distribute the responsibility of the undertaking, and to associate with Sir FREDERICK LEIGHTON and Mr. POYNTER, if they are willing, Mr. HUGH STANNUS ; but whatever is done, and by whomsoever, the only conditions under which the decoration of the dome of St. Paul's, or any other great work in decoration, can by any possibility be a success is that we let the artists as much as possible alone, and do not hamper them over-much with instructions or restrictions.

#### NOTES ON EXHIBITIONS.

THE traditions of our water-colour school still linger within the galleries of the Royal Society of Water-colour Painters, and keep up its exhibitions as the most representative of excellence and variety. The sketch and study exhibition of this winter season, opened more than a week since, has the interest belonging to genuine examples of preparatory work. Mr. ALBERT GOODWIN's delicious little bits of Italian towns are sometimes hardly more than the daintiest indications of building and perspective view, hardened into outline out of a mist of graduated rose and ochre. Other pastoral English subjects are manifestly outdoor work. The manipulation of Mr. GOODWIN is peculiar. He seems to rub and soak his paper sometimes past belief, and yet the forms are always delicate in *finesse*, while he attains to a fruity bloominess of colour quite his own. Mr. BOYCE, often an absentee, sends some sketches done in past years in Scotland and England, quietly faithful, and luminous as possible, having an individual character in the selection of homely or unlikely subjects that, in the hands of an artist less intimate with nature's magic, would be prosaic. The uplands and pastoral scenery of England find good interpreters in Mr. THORNE WAITE, Mr. TOM LLOYD, and Mr. EYRE WALKER. *Summer Morning in Yorkshire*, by the last-named, is admirable for gradation of misty sunlight diffused over the greens of a wooded valley, broken into variety of tint by successive distance. Mr. DAVIDSON is strong in broad coast studies, especially in the skies. Some important painters do not show. ALFRED HUNT has nothing, nor A. FRIPP, nor Mr. TADEMA, nor Mr. HALE. Mr. FRANCIS POWELL sends only a small and clever study of autumn foliage—quite a novel line of subject from him. Mr. HENRY MOORE also exhibits landscape, a welcome variety in his programme of sea studies : *Farm at Walberswick* is crisp, luminous, and honest outdoor work.

At the official head of the figure-painters, President Sir JOHN GILBERT slashes away with his broad, wood-draughtsmanlike touch in a *melée* of horses and men beating *A Retreat* across a swollen ford, and in an attempt to make the subject of the *Prince and Princess of Wales Going to a Drawing Room* attractive by a blaze of scarlet-coated soldiery, and a play on red, black, and white. Mr. CARL HAAG fortunately has been in the mind to send two old studies of Eastern heads in his good first—or, perhaps, properly speaking—second manner. Mr. CHARLES GREGORY has been busy in Brittany with groups of *Blanchisseuses*, and women chaffering at fruit-stalls in picturesque nooks : clever, bright, well-drawn studies all, only wanting strangely in coherent composition or selection.

A more serious school finds exponent in Mr. POYNTER's chalk heads, and like studies by Mr. ALBERT MOORE ; and Mr. SHIELDS shows one of his full-length designs—an *Abel*—for the Te Deum window at Eaton Hall, a finely-conceived figure. The introduction of black-and-white work is a great gain to these winter exhibitions, as, on a lower level, is the use of toned mounts. Unluckily the white mounts have the overwhelming preponderance, and swamp in a dazzling margin, doubled by juxtaposition, many good drawings. It is disappointing to find no architectural or interior subjects by Mr. HODSON. The best things in this line are by Mr. HENRY WALLIS—a *Bishop's Tomb*, and *Doorway of Don Pedro's Palace, Toledo*, both impressive studies, splendid in colour and texture, though rather blurred in execution, and an unexpectedly satisfactory picture of the *Interior of St. Bartholomew the Great*, by Mr. ANDREWS, which is worth ever so much more artistically than that painter's Spanish galleons and British men-of-war.

The Fine Art Society is showing a roomful of water-colour drawings in Venice by M. ROUSSOFF, a Russian artist, who, it is said, evades the arbitrary veto against pursuit by a noble of a profession, under this pseudonym. This is not the first time that the dashing studies of this painter have been shown in the same place ; indeed, one or two drawings already exhibited swell the number of the present collection. M. ROUSSOFF is at home in modern Venice ; he loves its nooks and corners, its vivacious people, its charm of reflected lights and narrow perspectives in side canals, its peeling, plastered walls, opaline in play of colour, its remnants of rich sculpture in out-of-the-way places. With singular surety of hand, that needs hardly a pencil-line to guide it, he draws in with the brush what of all this and other subjects attract him, and plays with a brilliant palette that runs from delicate and pearly greys to a motley breaking out into crude irruption of metallic hues in a scheme else fully harmonious. Large and clean in his full wash of aquarelle, his method is wholly unlike the stippling and scrubbing by which much modern English work has attained peculiar effects. It is the kind of ready art that might degenerate into cheap show, but hitherto only progress and a consolidating style are apparent, so that one may hope much of M. ROUSSOFF. Skilful in the use of the figure, two of the most attractive pictures have place within the rich and carved *coro* of some Venetian church : a white-haired canon watching like *The Cat and the Mouse* a young chorister poring over a ponderous choir-book ; or the same old man leaning reposefully in his stall and listening to the hungry-looking *Novice* who reads aloud the office of the day. The clever modelling of the faces, the accurate expression of attitude, the whole narrative putting together of the subjects, are artist-like in high degree.

Whoever wants to see the finest study of childish beauty and expression Mr. MILLAIS has painted for a long while, should go to Mr. WHITE's gallery in King Street, and look at *The Little Waif*. Where the painter found such a model, he and heaven know best ; but exquisite she is, with the yearning eyes of mysterious experience, and the sweet grave mouth of exquisite innocence. The picture is to be published in photogravure by Messrs. DOWDESWELL, and is painted with heavy impasto, that looks, spite of masterly brushwork, rather unctuous and sloshy.

At the same room, which holds at present a good deal that is interesting, hangs on view Mr. ORCHARDSON's last and best picture. The subject is an eighteenth-century ball-room incident, where a young girl, fresh from the school-room, all shy grace and beauty, makes her *debut* in *Her First Dance*—a minuet—with a dashing young man of the town, both duly gazed at and gossiped over by groups of critical onlookers. The whole narrative tells like a chapter by JANE AUSTEN. As usual with this painter, the figures, on comparatively small scale, are placed upon a canvas with large unfurnished spaces ; but this time Mr. ORCHARDSON has been at pains to tone with utmost care for delicate gradation the expanse of pale panelled wall and waxed oak floor. Moreover his painting throughout is painting, and not etching with the brush ; the flesh is admirably modelled, the textures are deftly indicated. The scheme of composition is balanced with excessive care—a wrong line would have thrown it all awry ; but it is entirely out of Academic rule, and has that accidental look about its order which is supposed by fond æsthetes to date from Japan. This picture also is to be brought out in photogravure by Messrs. DOWDESWELL.



## THE ARCHITECTURAL ASSOCIATION.

THE fourth ordinary meeting of the Association was held on Friday evening, the 5th inst., Mr. Cole A. Adams, president, in the chair.

The following were elected members:—Messrs. W. F. Cave, A. J. Stock, W. Simion, L. Sargeant, E. E. Wilkins, A. W. Shortbridge, F. J. Stone, A. R. Jemmett, T. C. Agutter, H. A. Pertwee, R. A. Rix, B. Woolard, R. J. Haddon, E. H. Fry, H. Wilson, F. J. Curwen, E. T. Gosling, J. Mussellwhite, J. R. Lawes, J. Barratt, R. C. T. Gordon, G. M. Inkpen, R. H. Weymouth, W. H. Parry, W. Randolph, E. H. Parks, E. W. Monro, A. Baker, A. F. Usher, A. W. Osborn, F. S. W. Goldsmith, V. R. Page, P. C. Turner, W. H. Hargrave, A. H. Worsley, E. Wright, B. Nordan, H. A. Reeves, T. Davison, H. G. Lidstone, J. Greateorex, H. S. Donaldson, H. Freeman, T. Duncan, W. M. Duke, G. Wilson, A. W. Soames, W. A. Finch, E. H. W. Holt, F. Fogerty, W. O. M. Morice, S. B. Beale, E. Woodthorp, F. Tayler, E. Brown, W. B. Gwyther, J. H. Wilson, W. A. Rapley, J. Haigh, E. H. Payne, J. Hudson, H. Fearis, F. G. W. Buss, E. Barnsley, F. T. W. Miller, C. C. Winmill, G. C. Nichols, H. H. Gordon, D. D. Jones, M. L. Ashburner, Hewitt, and W. N. L. Tayler.

THE PRESIDENT stated that Mr. Brooks, architect, desired to become a member, and he was then elected by acclamation.

Dr. DRESSER, Ph.D., F.L.S., then gave a lecture, the subject being

### Some Features of Japanese Architecture and Ornament.

Dr. DRESSER said that during the last week he had received notice to leave home. During the interval he had visited eight or ten towns, and had just managed to get back home in time to see them that evening, but he had not been able to prepare any paper to read to them.

Japanese architecture, he said, was in part native and in part foreign. Japan was in some respects similar to Great Britain, and consisted of three parts, with this difference, that the northern part was an island detached. It was inhabited by a simple race of most primitive manners, whose dwellings were of a very rude character, and whose temples were scarcely of a more advanced nature. Here was a photograph of one of the Ainos temples. These temples consisted merely of the trunks of trees fixed in the ground in a more or less vertical manner, with horizontal members above, and covered with a rude thatch. The main feature of the building was the roof, which was intended as a shelter both from sun and storm, and was supported on uprights. The most architectural of the Japanese edifices consisted of certain uprights and tie-pieces, while the primitive habitations were similar to the Ainos temples. Japan derived much of its architecture from Asia. From an early period there was communication between Japan and the Corea, which for a time became tributary to Japan. In the third Christian era hawking was introduced into Japan as a sport, and in the crests of the nobles hawks' feathers were introduced to show their fondness for the sport. Some of the architecture was derived from India, brought thence by the Buddhist missionaries. He had seen a temple of purely Indian work at Ugi, an outlying district of Kioto, which the priest admitted had been built six centuries ago by the Buddhist missionaries. Confucianism was not in any sense a religion with the Japanese, but as the nobles had to study the works of Confucius, or the duty of man to man, great temples had been erected to Confucius in Yeddo, Tokio, &c. One great temple, built after the model of a Chinese temple, had been converted into a library. Here we had Chinese influence directly brought to bear on Japanese architecture.

Chinese architecture had two sources. All were familiar with the residences on water, or lake dwellings, probably erected for safety's sake. As far as he understood it, the Chinese had resided in boats on rivers from time immemorial. Not that they lived on the water because there was no room for them on land, for there were immense tracts of land available; but they lived on the water because their ancestors had done so, and no doubt at some time lived on it for safety. He had a photograph of a Chinese temple, from which it could be seen that the architecture was boat-like, and had been derived from boats. The other source of Chinese architecture was the tent. Buildings were formed with poles crossed near the top, and projecting above. There were also buildings with right-lined members, the origin of which was not so easy to define. The Japanese had never, as far as he knew, adopted the junk-like architecture, but in many instances they adopted the tent-like, as also the right-lined form. A photograph of one of the greatest shrines in Japan showed this tent-like character. There were many other proofs that the architecture was to a great extent derived from China. One peculiarity was that the columns, as in the case of the important shrine at Nikko, was entwined with a dragon ornament, and here he had a photograph of a Chinese temple with the dragon on the columns. The different forms of latticed window-work in Japan corresponded with that in China. Key-patterned balconies and pagodas similar to those in China were to be seen in Japan. A gate similar in character to that which allied Chinese to Indian work, but far more simple in style, occurred also in Japan. They might, then, take it for granted that much of the architecture was derived from the continent of Asia, and proceed

to other considerations, first of all observing that it was generally held by Europeans that the Japanese had invented nothing, but had improved on everything derived from foreign sources.

The oldest building in Japan was erected more than 1,800 years ago, and during the whole of those centuries the seven buildings of which the shrine consisted were razed to the ground every twenty years. But before one timber was removed, another exactly like it was made, and so the whole was reconstructed, the idea being thus to convey the impression of perpetual youth. In its central compartment was placed the sacred mirror, which the Japanese believed was sent down from heaven and given to their empress. So sacred was it esteemed to be, that not even the chief priest entered that building—the Mikado alone could enter. In this building we got the first specimen of Japanese architecture known to exist. Next came a triangular building formed of logs of wood, that for 1,200 years had contained the treasures of the Mikados. He had been permitted to examine almost everything in that strange building. The inventory of its contents made 1,200 years ago was said to correspond exactly with the things now in that marvellous chamber. Many of the objects certainly were from Central Asia. Religion, climate, and material had all influenced the architecture. The religion was Shintoo, a most primitive form of religion, of which the great symbol was the mirror. Every temple had its mirror, in imitation of the sacred mirror before spoken of. The idea was that everything a man did should be capable of being revealed to the world, just as his own image was revealed to him in a mirror. Shintoo comprised also the worship of the sun, fire, and of heroes. Demanding that everything a man did should be capable of being revealed, it enjoined the most perfect workmanship, and that nothing should be "scamped." All were familiar with the perfect finish of Japanese articles. The same careful work was found at the bottom of a box as at the top, inside as outside, &c. This principle was so perfectly impressed on them that no educated Japanese would be seen in company with a "scamper" of work; but the faithful, honest workman, the art workman especially, was the friend of princes.

Then, for another thing, the Mikado was the god incarnate of Shintoo. Just as in the temple, so in every house in the land, a little altar was found—a little altar or dais with a niche, and a vase containing an offering; a joss stick or flowers was placed there to the god of the altar, that was to say, the Mikado, for should the Mikado visit a house he would sit on the altar as the god of the land. The Japanese treated these niches with the greatest reverence, and constructed them with the utmost care. In the poorest of houses they were beautifully constructed of wood, and so smooth and so lovely that it was positively a delight to see them. It exercised a great influence on the taste of the people because it was a part of every house in the land. Everything about the Mikado, however, in his personal surroundings, was absolutely of the plainest character, and when he died, his tomb, his monument, was only a mound of earth.

Then there was the worship of the sun and of fire. He had a plan which he had bought on the spot itself, that showed two rocks standing out in the sea—the rising sun, and a little altar. At a particular time of the year, standing behind the altar, and looking in a particular direction, the sun was seen rising midway between the rocks. He had stood thus and seen it, and as he was never behindhand in his devotional practices in Japan, had purchased frogs and offered them to the rising sun; he must, however, confess to having afterwards, unseen by the priest, taken back and pocketed some of the frogs, as he wanted to keep them. Whenever there was a Shintoo feast braziers of fire were lighted all round the shrine, and the priests said their incantations to them. As to the worship of heroes, any man who had done something great for his country was deified after death, as, for instance, the man who had made the harbour.

For seven centuries, up to the year 1868, the Mikado had never been among his people. His was too sacred a person to be seen except by his courtiers. The person they saw first in Japan was not the Mikado at all, but the chief of the Shogun or nobles. This man's income was equivalent to three millions sterling of our money, and, taking into account the purchasing power of money in Japan, he was the richest potentate on earth. The head of the Shogun was a Buddhist, and while the Mikado was always shut up in his palace and informed that everything was going on well, the head of the Shogun, who went about the country, was always encouraging Buddhism. One of the most interesting results of Buddhism was that it induced a most perfect harmony between man and all created things. A child was never known to hurt an insect or an animal. Butterflies came at their call, and the birds played with them. The moat around Tokio Castle was densely covered with wild geese and ducks, and for 700 years not a hand had been raised against them.

As to climate, they had a wet season, when for six weeks there is an almost incessant downpour of rain. The southern portion of Japan was tropical, the middle semi-tropical, while the most intense cold—so cold as to be almost unbearable to Europeans—prevailed in winter in the north, and even in central Japan. Fire was not used as a heating power. The climate, therefore, demanded that you should have a roof over your head. Japan



was a land of earthquakes, and that had been one of the greatest difficulties the Japanese architects had to overcome—to devise their structures so that they should not be overthrown by them. He had been, he believed, the first to enunciate how the Japanese pagoda was built. They must not credit him with finding it out, for he did not. His interpreter had shown it to him. In Tokio was a temple dedicated to agriculture. In a visit to it, when he gained the top he said to this person, "Your architectural construction is wrong—your timbers are far too heavy, and you have a huge pole coming up the middle here. If you use those great corner timbers, you do not want this middle one." "You don't understand," was the reply. This central rod was not continuous, but it hung in the building like the clapper in a bell. At the bottom of the building by lying down it could be seen that it was pendent. During an earthquake the pole swung, and thus always kept the centre of gravity within the base, so that no pagoda had been known to go over. Every Japanese house was loose from the ground; it was not fixed. The houses consisted of a certain number of uprights, horizontal pieces, roof and floor. If an earthquake occurred, the house which rested on stones would rock about, and then settle down again. The Japanese built only their castles of stone. The walls were built of enormous stones, the batters all leaning inwards. As the buildings were of wood, they must be protected from rain. The lower part of every column was encased in bronze, so that the water could not get in, and the same with the ties and other members of the structure. There must be a roof. Walls, palings, and even clothes-props had roofing to protect them from the weather. He regretted to say that some Englishmen had been trying to persuade the Japanese to erect buildings of brick. If they allowed themselves to be persuaded, the first earthquake would bring them down, and the Japanese would be sorry that they had adopted our notions. Etiquette entered into architectural matters. If a plan was wanted, the public master of etiquette must furnish it. Numerous restrictions, which he must pass over, were imposed, the number of doors would be limited, and so forth. The roofs were of many kinds, and included those of simple character, with gable and thatch, and others with a series of gables and a series of roofs, in some cases thatched, in others covered with tiles. Balance was more easily preserved in earthquakes by having top weight, and so tiles were preferred, though where the tiles would get shaken off and do damage, they substituted thatch. A most exquisite thatch was obtained by using little plates of the inner bark of a coniferous tree. Photographs showed all these details, and displayed the internal construction of the roofs, and the external aspect, and also some curious curved roofs. The roofs were supported by a system of bracketing; the roof was brought out gradually on brackets. In some cases the brackets were most appropriate, in other instances they carried the system to such a degree of complication that it was almost impossible to understand it at all. Ceilings were generally coffered, and were often of great beauty. Ceilings of temples were coffered, occasionally richly decorated with flat ornament, occasionally with carved work. Columns were generally circular. There were also octagonal columns and fluted columns. They were sometimes enriched with a spray of blackthorn twisted round, or with a dragon, and in many cases were covered with fine diaper work.

The construction of walls was next described by the lecturer, who then went on to call attention to the most important Buddhist shrine in Japan, a map of which he had bought on the spot at Nikko. The shrine was approached through an avenue of coniferous trees forty miles long, the last ten miles of which was formed by a double row of trees on each side, some 150 feet high, the enormous branches of which interlocked and formed a solid living arch. For a thousand years no woman entered it, and he believed he was the fifth European to visit it. In it were eight thousand lanterns, and he found the priest engaged in thawing the oil in a cauldron to feed certain of them that had to be lighted. For a Japanese map it was almost a true map. It showed the long, straight road leading to the shrine as turning round and coming back; but the fact was there was not enough space left on the paper to carry it straight on. The shrine itself on the map was tolerably accurate. At the end of the road a gate, of singular character, called a "torii," was entered, and a pagoda passed on the left. Before, however, getting to the pagoda there is a curious column, very small, but the whole of the Buddhist Scriptures are contained on it. Passing the pagoda, a courtyard was entered, with a curious triangular building of logs. Then there was a water-tank, generally a very beautiful and wonderful structure. It consisted in this case of monolithic granite columns, which slightly sloped inward, their upper portions encased in gilt bronze. The water-tank itself was a great granite vessel, so exactly level that after the water entered at the bottom and filled the tank it flowed over the entire edge. Every one had to wash themselves, and also to wash their mouth out, before entering the temple. In this courtyard there was also a stable, in which a sacred horse was kept; the stable and fittings made of plain pine wood, exquisitely worked. A perfect gem of art was seen in some most exquisitely-carved panels. Next, passing along under another of the curious torii (and this gateway had a curious lotus-leaf base), a series of steps were reached that led to another court, in which were several

beautiful buildings, and, among other things, two strange objects—a huge Gothic lantern, and the other a Renaissance candelabrum. presents probably from the Dutch, who paid a yearly tribute. One of the buildings in the court was a belfry. Passing into the inner court the sanctuary itself was reached, the finest specimen probably of Buddhist work in the world. The marvellous execution of the carving and the diaper-work were worthy of attention.

Time, the lecturer said, would not allow him to speak of many points he had intended. He had been going to speak about ornament as springing from the architecture, but there was little to be said about it. The Japanese had a distinct conventional ornament besides that which consisted in the representation of natural things, and he might have shown how some was derived from the worship of fire. He had had some drawings made by one of the best Japanese artists of flat surface decoration, and, among other details he pointed out here a column, there a tie-piece, brackets, the horizontal members, and called attention to the fact that the diaper-work fitted exactly on the beams, while in the architecture he had not found any example of the odd cutting off so characteristic of their decorative work. In connection with the temples, the lecturer spoke of certain columns with a representation of water on them. He had a word to say about that. When his work on Japan appeared some years ago, a writer, reviewing the work, asked what ornament could be more absurd as applied to architecture, and said that the author himself appeared to have had some difficulty in swallowing the water. Then, in another article, speaking of the design of certain columns of the Natural History Museum at South Kensington, ornamented with representations of water, fishes, &c., the writer remarked that the effect of such treatment was very refined, and gave an interest, &c., &c. The lecturer said he had also intended to say a word about the beautiful poetry of Japan. There was a poetry about almost all they did or said that separated Japanese art from our own. Scarcely a thing or a building but reminded the Japanese of something loved or dear to him. Nothing was done by them but with a care that manifested the utmost interest of the workman, and he would that he could show them how all these details appealed to a people who loved nature, and who felt that they were cared for by nature.

The PRESIDENT in thanking the lecturer for his address, referred to Viollet-le-Duc's remarks on the pyramidal form of construction in regard of its suitability for preserving the centre of gravity on occasion of earthquakes. He noted the fellowship that existed between Greek and Japanese art, inasmuch as the same loving care and precision of hand was apparent in each, and that great charm and beauty of their art, that they approached nature so closely, and yet so perfectly preserved conventionalism.

Mr. STATHAM proposed a vote of thanks to Dr. Dresser. He spoke of the remarkable way in which the Japanese made use of everything that was close to hand, turning it to artistic purpose, and putting on everything a finish which was an example of thoroughness seldom to be found in the present day. As was apparent from the lecture, a great deal of the ornament was perfectly irrelevant in particular cases. They put on an object all the ornament they could, and its beauty enchanted the beholder, but it did not bear that relation to its position, space, &c., which ornament properly applied should do. This showed an illogical mind, and in this the Japanese differed from the Greek because he had not the logicalness of the Greek. As to the water decoration, fishes, &c., at the Natural History Museum, Mr. Statham thought that ornament was not out of place. It was symbolical, for it was applied to the columns in the Fish Museum. A column was essentially meant to support weight. The Greeks gave nerve and sinew to their columns by fluting, &c. The Japanese put the water ornament on his column, and amused himself in that way.

Mr. J. O. SMITH said the columns at South Kensington with the fish ornament were to be found in the mineral gallery, the bird gallery, the mammalia gallery, and nearly every gallery except the fish gallery.

Mr. BLAGROVE suggested that a symbolical meaning might be attached to the representation of water in the Japanese work, which would render it appropriate.

Mr. STANNUS said that considering the idea of safety being connected with columns, as in the case of lake dwellings, the imaginative and poetic temperament of the people might have allowed them to represent water from a poetic idea on the columns to which they were so much indebted. Mr. Statham's view of their want of logic he should prefer to call a want of reticence, and to say that the Japanese artist never knew when to hold his hand, whereas the Greeks practised temperance, a virtue that tempered all others and taught the Greek where enrichment, as well as roughness or rudeness, should stop. In conclusion, he seconded the vote of thanks.

Mr. H. D. APPLETON, hon. secretary, regretted that they could not see all the specimens that Dr. Dresser had offered them that night to illustrate his lecture. As it was, however, the photographs, &c., exhibited could hardly be done justice to for want of room to place them, and had Dr. Dresser's other treasures been brought no one would have been able to get into the room.

Mr. BURROWS asked if there were any stone quarrying in Japan.



Mr. PITE cordially supported the vote.

Mr. W. H. ATKIN BERRY, hon. secretary, said the map of the shrine explained to them by Dr. Dresser, reminded him of Mark Twain's map of Paris. He asked if they made plans for the erection of their buildings, and if so, if they prepared them in the same light and easy way.

The PRESIDENT, in putting the vote, which was carried by acclamation, said that Mr. T. W. Cutler had been prevented from attending by illness, and that he hoped that gentleman would soon be restored to health.

Dr. DRESSER said he had meant to point out Mr. Statham's error about the columns at South Kensington, but this had already been done, but he might add that the reviewer of his book had not said one word about the Japanese water ornament being objectionable because inappropriate; nor had it been said that Mr. Waterhouse's ornament was beautiful because it was appropriate. Certainly when the columns were designed it was not quite settled as to what rooms would be devoted to the different classes of creatures. It might have been his fault that he had led readers of his book to suppose that representation of water was a common decoration for columns, but it was not common. In the case of the temple, the columns of which they were speaking of, it was dedicated to the fish god. He had no knowledge that quarrying ever took place in Japan. It was said of Osaka Castle, and he had heard the same of the castle at Tokio, that the stones had been brought 200 miles, and the curious thing was, how did they managed to bring them when there were no roads, but only narrow little raised banks between the rice-fields. Carefully drawn plans were prepared by the Japanese for their buildings. They drew elevations, but put in little bits of perspective to help out the elevation. They were not very unlike the usual architectural elevation. He had seen the plans for the rebuilding of the Temple of Shiba, which had been burnt down, to his regret, for he should have wished to have seen it. He gave a donation towards the rebuilding, and a few days after, in passing, he saw a large frame containing the names of people who gave subscriptions on little wooden labels, and he found his own name, in English:—"The Great Professor Dresser, of London." The priest promised always to pray for his soul, and for his country's soul.

An immense number of photographs illustrated the lecture, and were pointed out in explanation of points of construction and ornamentation which Dr. Dresser wished to call attention to. In every case Dr. Dresser had seen the object photographed. On conclusion of Dr. Dresser's reply, these were examined with much interest.

## MR. RUSKIN ON LANDSCAPE.

MR. RUSKIN'S final lecture to his pupils for this term, given at Oxford last week, began, says the *Pall Mall Gazette*, with an expression of the "disappointment and surprise which, on reviewing the results of my lecturing and working here for upwards of twelve years, I feel in being forced to the sorrowful confession that not a single pupil has learned the things I primarily endeavoured to teach, nor used of his own accord, so far as I know, in a single instance the examples which I put before him as most admirable in my especial department of art, landscape."

### *Examples of Landscape Drawing at Oxford.*

How complete and numerous these examples are every one knows who has visited the Taylorian picture gallery or seen in the "Ruskin drawing-school" the insides of the cabinets filled with Mr. Ruskin's own drawings. "You may wonder," continued Mr. Ruskin, "why the examples I have given you of landscape in the school are my drawings and not Turner's. But Turner's are of a finesse beyond what has ever else been attained, and for that reason not useful as working examples. But I am proud to think that these drawings of mine (several of which were exhibited at the lecture), done thirty years ago at the foot of the Matterhorn, are entirely right as examples of mountain drawing, with absolutely correct outline of all that is useful for geological science or landscape art. And I am proud to think, too, that though at the time I did them I had never seen Turner's drawings, mine are on exactly the same plan as his—that is to say, I always drew an absolutely right pencil outline before putting in any colour whatever. But though I have been preaching, crying, shrieking to you that this is the method of all true landscape painting, there is not one of you who sharpens his pencil-point instead of seizing his biggest brush and going dab at the mountains with splotches of colour. And then in the gallery upstairs there is the unequalled collection of Turner drawings, which with some self-denial I gave you twenty years ago, and which has lately been completed by the kindness of the trustees of the National Gallery at the intercession of Prince Leopold."

### *Neglect of Them by his Pupils.*

Why was it, then, Mr. Ruskin returned to ask, that none of his examples in landscape had been used, none of his principles adopted? "I perhaps trusted too much to what I had before written on the subject of landscape; and in the first years of my

professorship drew the attention of my pupils only to the higher conditions of pictorial imagination, which had been occupied in religion and ethics. As it has turned out, the religion of England being in its practical power extinct before her science, and the ethics of England extinct before her avarice, everything that I have written of the religious paintings of Italy has been useless, until lately in the form of guide-books; while the value of the few words I spoke on landscape was still more hopelessly effaced by the vast irruption of sensual figure study, patronised by the now all-powerful Republican *demi-monde* of the French capital. Respecting the general relations and dignities of landscape and figure painting, I propose very earnestly and carefully to address you in a spring lecture. But with respect to the especial danger and corruption of existing schools of the figure, I must point out one or two chief facts for your immediate consideration."

### *Landscape Superior to Figure Painting.*

"First, landscape, however feeble or fantastic, cannot be definitely immoral. It neither mocks what is venerable, nor recommends what is lascivious. But the sale of figure sketches or paintings by persons of inferior talent depends almost exclusively on its being addressed to the vanity, the lust, or the idle malice of the classes of society developed by the corruption of large towns. Secondly, the idea of greater dignity, naturally attached to figure painting of higher pretension because it implies a strict course of previous academical study, entirely ignores the primary law of human education, that the more you teach a fool, the more manifold a fool you make him. Nothing is so melancholy, nothing so mischievous, as the academical imitations of the great men by the little ones, and the pompous display of laboriously artificial attainments by men of faculties inherently and natively contemptible. During the first half of this century the artists of England were divisible almost without exception into two classes: men of modesty, sense, and industry who were forming a pure school of pathetic and meditative landscape, rising with the quiet flow of a mountain well out of the formality of the older 'views' of this and that; and men, on the other hand, of mean ambition, foolish sentiment, and vulgar breeding, who reduced the figure-painting of the Academy to the inanity from which it was only rescued by the splendid indignation of Rossetti, Millais, and Holman Hunt—all of them, observe, introducing, if not as the basis, at least as an essential and integral part of their conception, a landscape elaborated to the last grass blade and flower petal."

### *Greater Difficulty of Landscape.*

"Thirdly, I will not in this brief notice touch on the actual difficulties of landscape, as compared with figure painting; but I beg you to observe the requirement for it of far greater industry. With an hour's work a good figure painter can produce a satisfactorily realistic image of the fairest human creature; set him to paint a heathy crag or a laurel coppice, and see what he will make of it, giving him an hour for every former minute, or sixty hours instead of one. Why then paint it with so much care, do you say, when the painting of the pretty lady is so much nicer? Well, my own answer to that would be, because the pretty lady herself is so much nicer than the painting, and will always be there if you ask her, but the laurel coppice or the heather crag won't come for the asking: you must paint them or forget them. That in parenthesis. Returning to my main point, note that the painting of landscape requires not only more industry, but far greater delicacy of bodily sense and faculty than average figure painting. Any common sign-painter can paint the landlord's likeness, and with a year or two's scraping of chalk at Kensington any cockney student can be got to draw, effectively enough for public taste, a straddling gladiator or a curly-pated Adonis. But to give the slightest resemblance to, or notion of, such a piece of mountain, wildwood or falling stream as these in this little leap of the Tees in Turner's drawing, needs an eagle's keenness of eye, fineness of finger like a trained violinist's, and patience and love like Griselda's or Lady Jane Grey's."

### *Delight in Landscape dependent on Human Sympathy.*

"Without, however, further reasoning just now why or with what feelings we should try to paint landscape, I return to my immediate business, to ask you why, in no single instance, any of you have painted a bit in my way. For one of you that used to go to Scotland or Switzerland, a thousand go now; for one descriptive passage in poetry or novel that used to be given before Scott and Byron told you that nature was beautiful, a thousand romancers and troubadours paint now their landscape backgrounds for personages whom they couldn't make else of any account; and yet here are twelve years I've been your drawing master, and not one of you has brought me a bit of Alpine snow, of Greek sea, or of English greenwood drawn with as much pains or heart as dear old William Hunt has put into a horn tankard. I do not know what your answer would or will be. But my own explanation of this scorn of landscape will certainly surprise you. I attribute it, and I attribute it with a very strong conviction, to your having no sympathy with the people who inhabit the countries you visit. No passage of my old books is more often quoted than that in the 'Seven Lamps' as to the entire interest of landscape depending on our sympathy with



its history and inhabitants." The passage in question is that in which Mr. Ruskin describes "the broken masses of pine forest which skirt the course of the Ain above the village of Champagnole, in the Jura," and which he read in one of his former Oxford lectures, telling how much trouble he had taken to find the alliterations:—

It would be difficult (Mr. Ruskin says of this scene in the Jura) to conceive one less dependent upon any other interest than that of its own secluded and serious beauty; but the writer well remembers the sudden blankness and chill which were cast upon it when he endeavoured, in order more strictly to arrive at the sources of its impressiveness, to imagine it, for a moment, a scene in some aboriginal forest of the New Continent. The flowers ("in clusters crowded, for very love") in an instant lost their light, the river its music; the hills became oppressively desolate; a heaviness in the boughs of the darkened forest showed how much of their former power had been dependent upon a life which was not theirs, how much of the glory of the imperishable, or continually renewed, creation is reflected from things more precious in their memories than it, in its renewing. Those ever-springing flowers and ever-flowing streams had been dyed by the deep colours of human endurance, valour, and virtue; and the crests of the sable hills that rose against the evening sky received a deeper worship, because their far shadows fell eastward over the iron wall of Joux and the four-square kesp of Granson.

"But this point," Mr. Ruskin said, "I have never enough reinforced. The lecture in which I partly did so was never published; and you all go rushing about the world in search of Cotopaxis and Niagaras, when all the rocks of the Andes and all the river drainages of the two Americas are not worth to you, for real landscape, pathos, and power, this wayward tricklet of a Scottish burn over its sheets of low-levelled sandstone." Mr. Ruskin here showed the early Turner which he has lately acquired, and to which he referred, it will be remembered, in a former lecture. "Its whole force," he said, "consists in a dreamy and meditative sense that men were once living there, and spirits still moving there—that it was full of traces of the valour of our ancestors, just as it may still be full, if you will, of the traces of your love."

#### *The Contrary Case, Illustrated from Evelyn's Diary.*

To illustrate the contrary case—the absence of delight in landscape accompanied and conditioned by a want of sympathy for the people—Mr. Ruskin read a series of extracts from Evelyn's Diary, written for him by his god-daughter with a type-writer—"the only kind of machine of which I do approve." First there was English enjoyment of English landscape, telling of a piece of white marble "stained with a lively red, very deepe, as beautiful as if it had been natural;" and of Spie Park, where the house had "not a window on the prospect side." That is the rough type; for the gentle type Mr. Ruskin referred to Evelyn's building a study, a fishpond, an island, and some other "solitudes and retirements" at Wotton, which "gave the first occasion of improving them to waterworks and gardens." As for English travellers' enjoyment of French landscape, "we passed through a forest (of Fontainebleau), so prodigiously encompass'd with hideous rocks of white hard stone, heaped one on another in mountainous height, that I think the like is nowhere to be found more horrid and solitary." For an example of "French and characteristically European manufactured landscape," Mr. Ruskin referred to Evelyn's description of Richelieu's villa, with its "walks of vast lengthes, so accurately kept and cultivated, that nothing can be more agreeable," and its "large and very rare grotto of shell-worke, in the shape of satyrs and other wild fancys." The human sympathy involved in manufactured landscape is to be seen in its cost—"he has pulled downe a whole village to make roome for his pleasure about it"—making a solitude and calling it delight. And then, lastly, Mr. Ruskin read an account of how Evelyn took his pleasure in the Alps, passing through "strange horrid and fearful craggs," and treating the natives—as only the British tourist knows how. The pious Evelyn, or one of his party, had a water spaniel—"a huge, filthy cur" that killed a goat, "whereupon we set spurs and endeavoured to ride away;" but inasmuch as "amongst these rude people a very small misdeemeanour is made much of, we lay'd down the money, though the proceedings seemed highly unjust." These proceedings occurred on the Simplon Pass; and Mr. Ruskin showed in contrast to them a drawing of the St. Gothard by Turner, in which, as in other scenes, it is a human interest that gives the grandeur. The reader will remember in this connection Mr. Ruskin's description of the Pass of Faudo in "Modern Painters," where in "Turnerian topography" the "full essence and soul of the scene and consummation of all the wonderfulness of the torrents and Alps lay in a postchaise with small ponies and postboy."

#### *From the Alpine Club—Modern Manners.*

"Now, I dare say," said Mr. Ruskin, resuming, "you all think you have improved greatly in sense and good nature and love of scenery since Evelyn's time. I admit there are a certain number of you very different creatures indeed. But there is nothing to me so amusing in Evelyn's injustice to the poor peasants and terrified hatred of their Alps as there is in the total absence from the papers of the Alpine Club of the smallest expression of any

human interest in anything they see in Switzerland except the soaped poles they want to get to the top of, and their continual exultation over their cheese and beer, in their guides' legs and their own, without ever appearing conscious for an instant that every valley of which the blue breaks through the cloud at their feet is full of the most beautiful human piety and courage, being gradually corrupted and effaced by European vice, after contending for long ages with conditions of hardship and disease prolonged by European neglect, folly, and cruelty. And of the less adventurous Englishman content with flatter mountain tops here without question is the central type for this hour." Mr. Ruskin here showed *Punch's* cartoon of *The Old Lion Aroused*, to which he had referred in a former lecture, and in doing so he apologised for any pain that had been caused by his thus accidentally ridiculing Mr. Bright—for whose character he had in most things a great respect, although it was an "awful sign of the times" that so honourable and excellent a man should have stood up on a memorable occasion in the House of Commons to defend the adulteration of food as a legitimate form of competition. "You are all of you," Mr. Ruskin resumed with reference to this cartoon, "resolving yourselves, and that with rapidity, into this kind of British person, and this kind of British standard-bearer—consumer of all things consumable—producer of nothing but darkness and abomination—with his foot on all that he once revered, his hope lost in all that he once worshipped—a god to himself, and to all the world an incarnate calamity."

#### *The Return to Nature.*

"Your way out of all this I told you full fourteen years ago in my inaugural lectures, to not one word of which any of you have practically attended. I have indeed one pupil-friend, an accomplished and amiable artist, another a conscientious and prosperous lawyer—of formal school or consistent disciples, no vestige whatever. The time may yet come; anyhow next year I have again, with the ever-ready help of Mr. Macdonald, to begin at the beginning, and meanwhile I will close my discourses to you for this year by re-reading the conditions of prosperous art work which I laid before you in 1870." The passage which Mr. Ruskin read is in the fourth of his inaugural "Lectures on Art," on "the relation of art to use," in which it was laid down that, after recovering for the poor wholesomeness of food, the next steps towards founding schools of art in England must be in recovering for them decency and wholesomeness of dress and of lodging, and then after this that "nothing be ever made of iron than can be as effectually made of wood or stone, and nothing moved by steam that can be as effectually moved by natural forces. . . . And until you do this, be it soon or late, things will continue in that triumphant state to which, for want of finer art, your mechanism has brought them; that, though England is deafened with spinning-wheels, her people have not clothes; though she is black with digging of fuel, they die of cold; and though she has sold her soul for gain, they die of hunger. Stay in that triumph, if you choose; but be assured of this, it is not one which the fine arts will ever share with you."

"All this," said Mr. Ruskin in conclusion, "is called impossible. It may be so. I have nothing to do with its possibility, but only with its indispensability. And at any rate this much is possible to you—to prefer life in the country though it be dull to life in London, though it is merry; to look at one thing in the day instead of twenty; and to think of that one in such way as will give you some love for man and some belief in God."

#### GLASGOW ARCHITECTURAL ASSOCIATION.

AT the last monthly meeting of the Glasgow Association a paper on the "Nature and Harmony of Colour" was read by the vice-president, Mr. Henry Baldie. Of the two theories held by Newton and Brewster regarding the number of hues of those colours called primary, that of the latter was preferred as most practical when dealing with pigments rather than rays of light. The nature of harmony when derived from the complimentary colours was then considered, and illustrated by numerous coloured drawings and diagrams, with applications of the principles advanced in both pictorial and decorative arrangements. Mr. James Smith opened the discussion which ensued. A vote of thanks to the essayist followed. The last visit of the season included a large warehouse now erecting for Messrs. Wyllie & Lochhead, in Buchanan Street, of which Messrs. Campbell Douglas & Sellars are the architects; and new chambers for the Clyde Navigation Board, also in process of erection, Messrs. John Burnet & Son, architects. The former building has a terra-cotta frontage, which, owing to the novelty of the material in Glasgow, attracted much attention. The other is noticeable from the spacious proportions of the apartments, and the elaborate elevation. A lofty fire-brick extraction-shaft is also a noteworthy feature. Mr. Shand and Mr. Douglas are the respective clerks of works.

A Conservative Club is to be erected at Streatham, at a cost of 2,500*l.*, according to designs by Messrs. Wheeler & Holland, F.R.I.B.A.



## NOTES AND COMMENTS.

THE large number of unemployed workmen in Paris is exciting apprehensions in the minds of the shopkeepers. What is to be done with hordes of vigorous men, who have no means of support except alms, and who are surrounded by riches on which they feel they have a claim? Under the Empire it was possible to meet similar emergencies by costly works, which were carried out without much thought of political economy. Nowadays it is supposed that public and private works should be determined by the chance of profit. The Paris contractors are unable to suggest any kind of public works which will repay the outlay. The Government can do nothing, and as the taxation of Paris is already too oppressive, the Municipal Council dare not undertake the formation of new streets. Many of the large buildings which have been constructed by public companies are remaining unoccupied, and are a warning to speculators. The masons, carpenters, house-painters, plumbers, are all complaining. The trade societies report that there are at least 10,000 painters and 10,000 carpenters out of work. If the building trades were flourishing in the provinces, there might be a temporary removal of workmen from Paris, but the same complaint of enforced idleness is heard in many parts of France. It is even feared that if the works for the exhibition of 1889 could be started, so many provincial workmen would be attracted to the Champ de Mars that the condition of Paris must be worse than it is at present. While trade is at a standstill it is admitted that there is an abundance of capital awaiting investment.

THE Walker Art Gallery in Liverpool contains a valuable collection of pictures. It is now felt that something more is needed if the gallery is to exercise an influence on local art. A speaker at a late meeting of the Scottish Academy pointed out that Liverpool is without a resident sculptor. Students of architecture are also handicapped. It is proposed to use the lower rooms of the gallery for a museum of casts from the best works in sculpture and architecture, arranging them in such a way as to indicate the history of art. The collection is to comprise at least one or two specimens of Assyrian sculpture, a small selection of Greek, Græco-Roman and Early Florentine sculpture, with casts of English, French, and German Gothic sculpture and wood carving. The examples in the British Museum, South Kensington Museum, and Architectural Museum would be utilised, and it is supposed that there would be no difficulty in obtaining copies from Paris, Florence, Rome, and Naples. Through the generosity of Sir A. B. WALKER sufficient funds are available for expenses. The project is deserving of general support. But if it is to be successful, the selection and arrangement must be left to artists. In Liverpool the amateurs are allowed to have more than their just share of influence, and it cannot be said that the result is entirely satisfactory. There is much hospitality by the members of the Arts Club and other societies; but dining and making speeches are not the best way to found a school. The Liverpool amateurs are eager in lionising if the lions come from a distance. Local art does not, however, count for much among dilettanti orators.

THE Old Water-Colour Gallery in Pall Mall contains an interesting collection of landscapes in oils and water-colours by Mr. CALVERT. The artist has studied in France, and the influence of MILLET is to be seen in his works. What is shown is out-of-doors work, and transient effects of light are well rendered. In some there is a solemnity which is more characteristic of the landscapes than of the figure pieces of the modern French school. The paintings represent a variety of scenes, from orchards to bleak shores, and in all there is work that is conscientious and able.

TRAMWAYS are now so general in this country that the question of working by steam has a general interest. From a paper which was read by the Hon. Mr. PARSONS at the Institution of Civil Engineers last week it appears that, where a frequent service is maintained, the cost of working the engines, including wages, fuel, oil, and repairs, is 2.28*d.* per mile run. For the engines and the cars, an annual allowance for depreciation at the rate of 10 per cent. is sufficient, provided the

ordinary repairs are paid for out of revenue. The depreciation on the line may be taken at the rate of 3 per cent. per annum, which is laid aside to form a sinking fund, interest upon which is allowed to accumulate at the rate of 5 per cent., and in this way the cost of the line may be paid off in about twenty years. As the result of these computations, the total working expenses of a line, including all items of expenditure, amount to 9.33*d.* per mile run. As a practical rule, every surplus penny per mile run above the working expenses gives 2.2 per cent. dividend to the shareholders. It is possible to obtain tramway engines which are quick and powerful in action, but hitherto engineers have been indifferent to the form of the engines.

THE election of the committee of the Society of French Artists is over. M. BAILLY is president for the year, and MM. GUILLAUME and BOUGUEREAU are vice-presidents. The following are the secretaries for the sections:—*Painting*, MM. VUILLEFROY and TONY ROBERT FLEURY; *Sculpture*, M. THOMAS; *Architecture*, M. CHARLES GARNIER; *Engraving*, M. JULES JACQUET. M. BOUGUEREAU is president for the section of painting, M. CAVELIER for sculpture, M. QUESTEL for architecture, and M. GAILLARD for engraving. M. TONY ROBERT FLEURY has for several years devoted a great part of his life to the administrative duties of the Society, and the artists have recognised his zeal by placing him at the head of the poll with 658 votes. Next in order are MM. BOUGUEREAU, J. LEFEBVRE, BONNAT, HUMBERT, DETAILLE, BOULANGER, CABANEL, and J. P. LAURENS. The last names on the list are MM. CAZIN and GEROME. M. MEISSONIER obtained only 327 votes.

ACCORDING to Mr. GARDNER, the English consul, a great trade could be done in timber in China were it not for the obstacles placed in the way by the native authorities. The reason alleged for discouraging the trade is, that the inhabitants of the forests are wild and lawless, and trade might lead to riots; perhaps the real reason is that they fear the country would be deforested. The taxes and cost of carriage for bringing down timber from places under forty miles' distance adds several hundred per cent. to the prime cost. In some parts of the country large oak trees can be bought for a few shillings. Labour is cheap, men can be got at 3*d.* a day; at Ichang 8*d.* or 9*d.* has to be paid. The Chinese do not value the oak. It is only used for burning into charcoal and for making the bottoms of canoes. With the native primitive tools the oak can only be sawn and shaped with great labour, and in the south it is useless for building, as the white ant especially affects it.

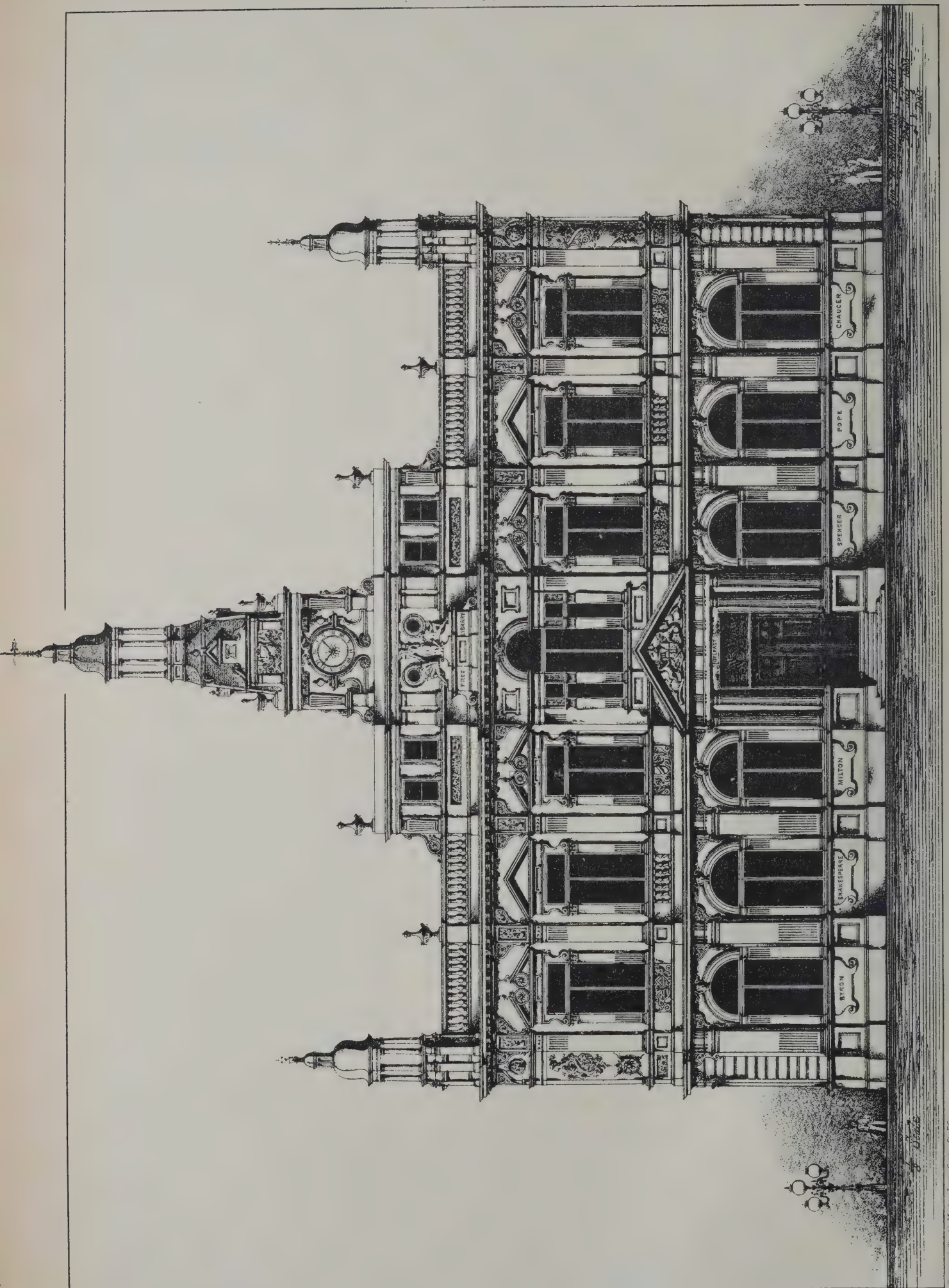
CONNOISSEURSHIP has received a blow through the discovery that a frame for a mirror by a worker in metal, who is now living in Paris, was purchased as a veritable antique by one of the ROTHSCHILD family. It was exhibited as Renaissance work. M. LEGROS, the artist, sold his work some years ago for a trifle. Afterwards he left France, and was employed for a time in Birmingham. On his return to Paris he found that his style of work was not appreciated. It is possible that, since his mirror frame has been taken for the work of a man who lived a couple of hundred years ago, there may be a demand for M. LEGROS' productions. But the discovery suggests the injustice of the modern system of art patronage. In this case we find a clever artist neglected, while vast sums are every year expended on works because they are old. If M. LEGROS would lend himself to the deception of allowing his works to be identified as those of BENVENUTO CELLINI, in a few years he might be one of the richest artists in Paris.

THE authorities of the Science and Art Department have called the attention of the Glasgow Corporation to the fires which have occurred in the Art Galleries in Sauchiehall Street during the past four years. It is considered most desirable that the galleries should be isolated, and not liable to the constant risk of destruction in the event of a fire taking place in any other portion of the building. From time to time there are loan exhibitions, and at present a collection of electrotype reproductions, on which the Department has a lien to the extent of 250*l.*, is placed in a gallery over a baker's shop. The subject was to be brought before the Corporation at a special meeting on Wednesday.









DESIGN FOR FREE LIBRARY, BELFAST.

BY T. R. RICHARDS, ARCHITECT.

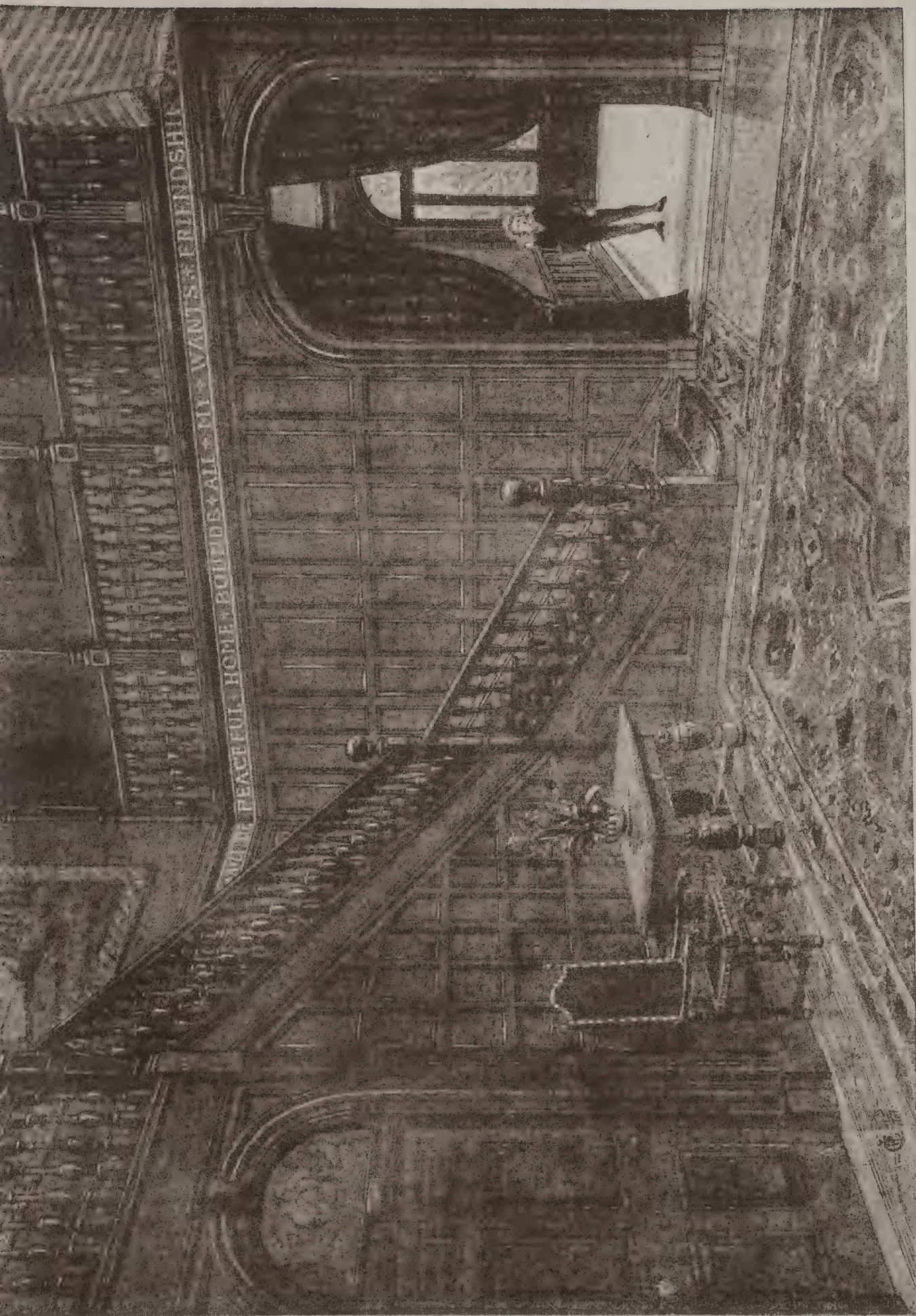












DESIGN FOR A HALL & STAIRCASE .

LEWIS P. CRACE, ARCHITECT.





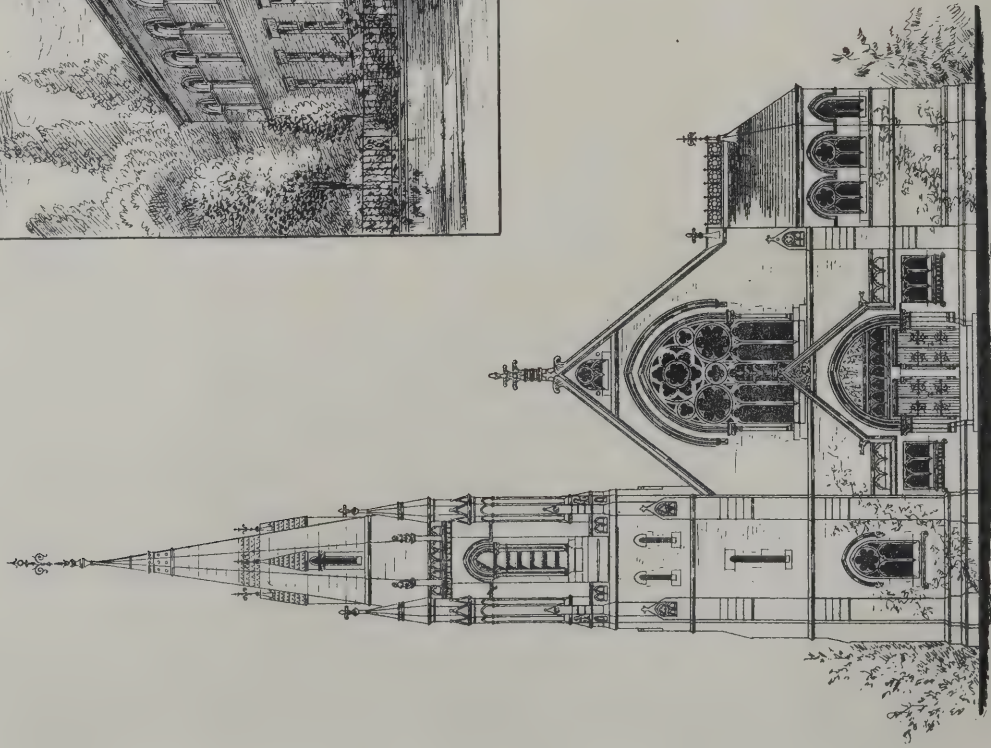
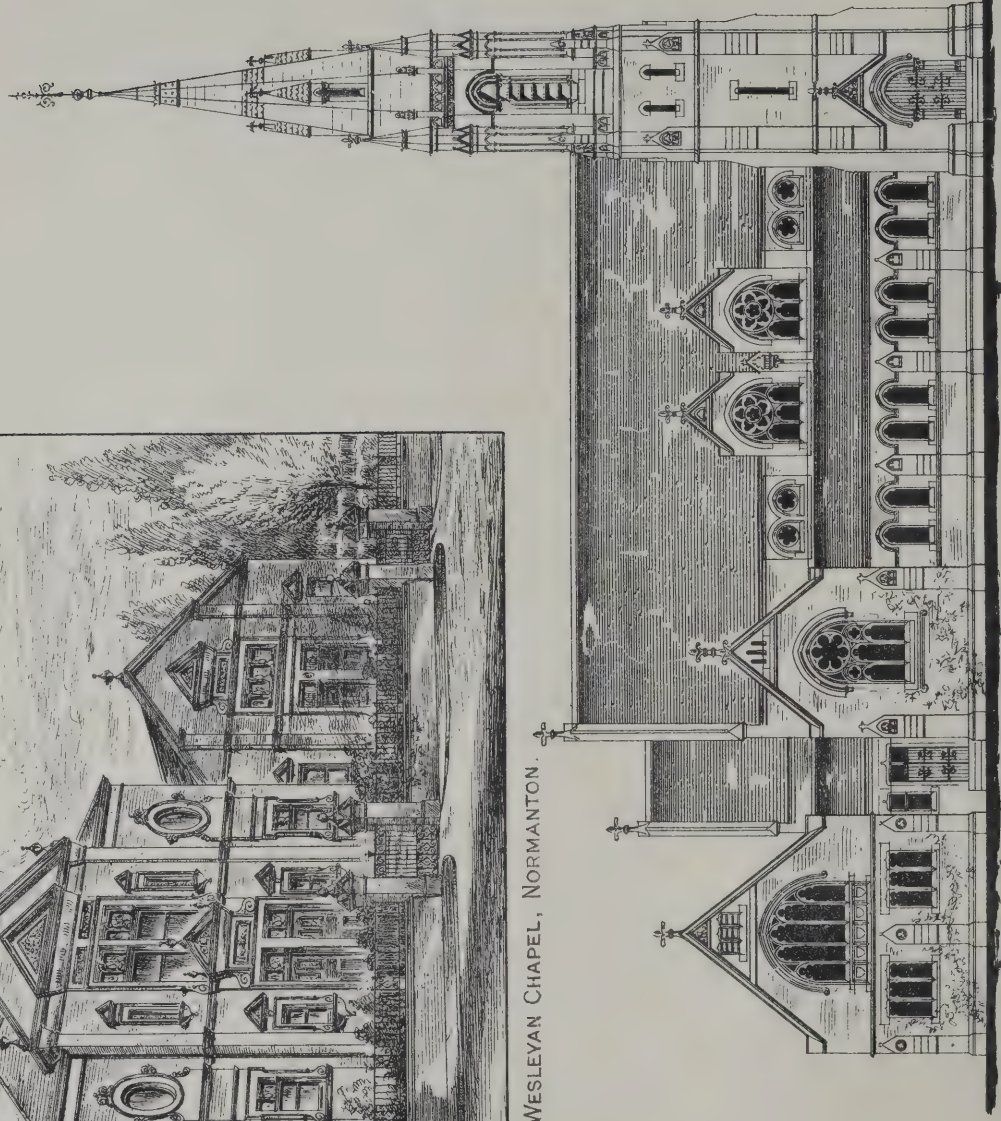








WESLEYAN CHAPEL, NORMANTON.



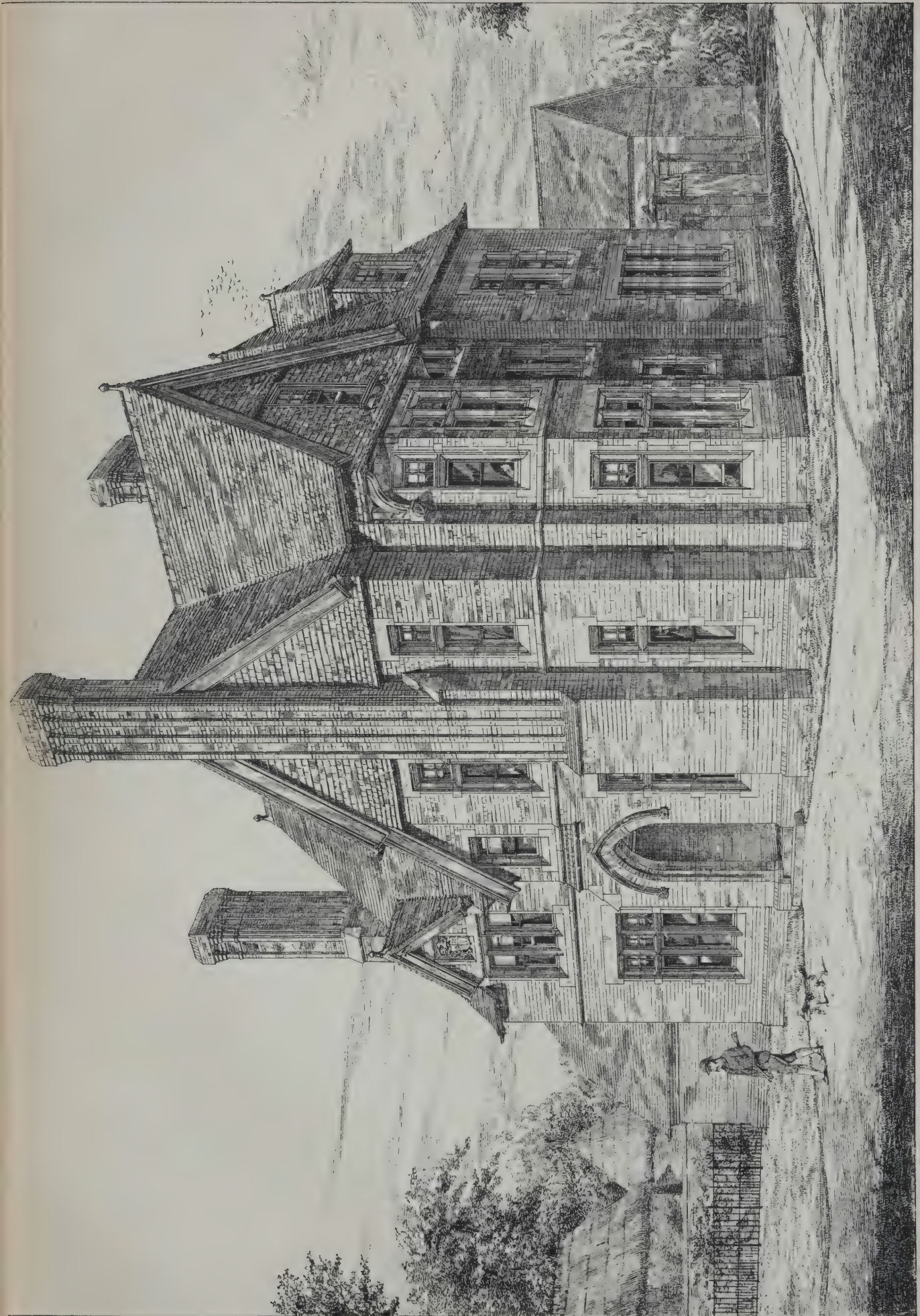


Public Affairs, 100 Capitol Bldg.









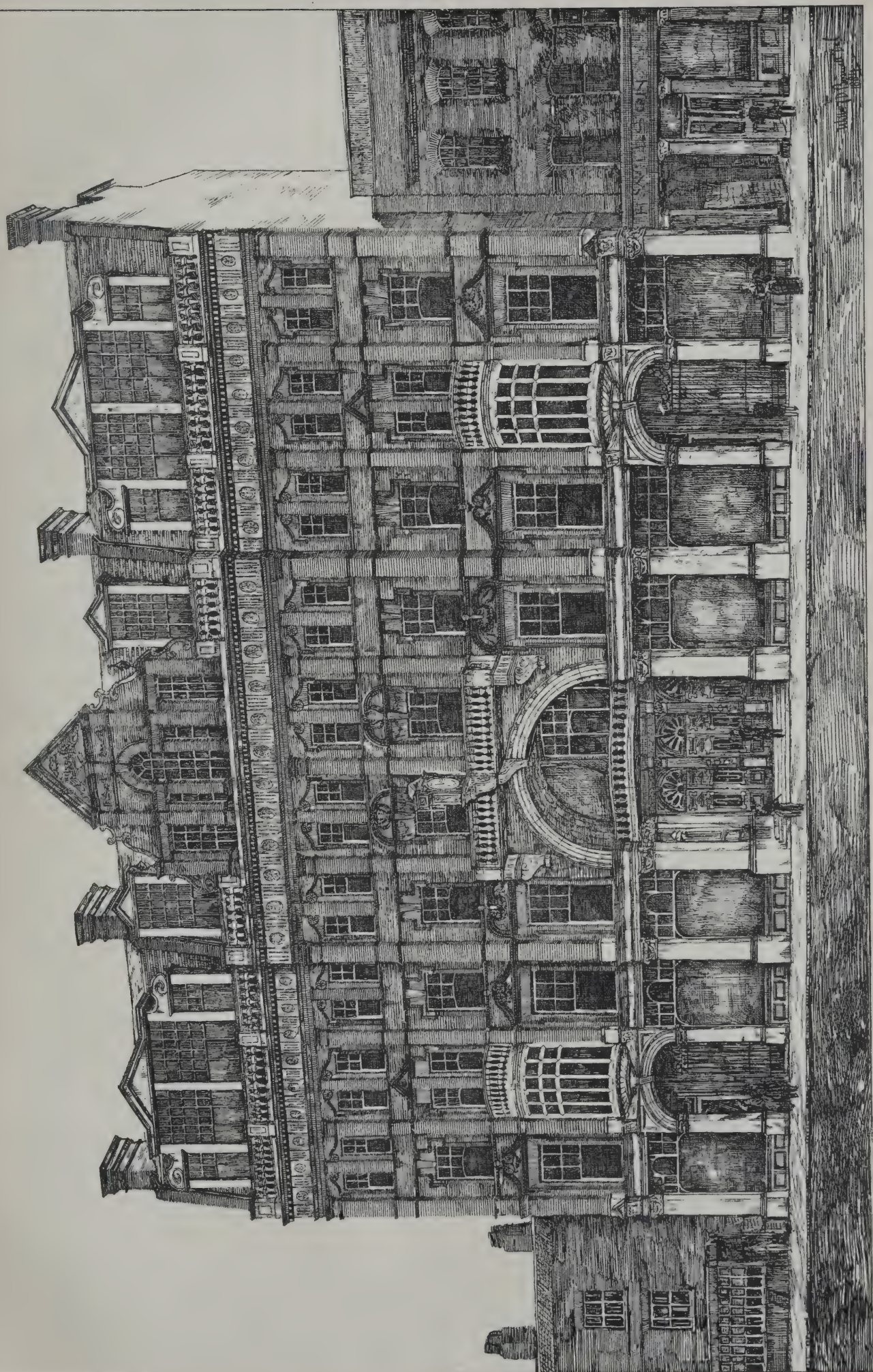
FARM HOUSE DRAYTON NEAR DAVENTRY  
FOR WILLIAM ROSE HOLDEN ESQ

A. B. PHIPSON & SON, ARCHITECTS  
COLMORE ROW, BIRMINGHAM









**Humphreys' Hall Mansions.** Albert Gate. Hyde Park, S.W.  
Romaine-Walker  
& Tanner,  
Architects.







## ILLUSTRATIONS.

## DESIGN FOR A HALL AND STAIRCASE.

THE accompanying illustration is from a water-colour drawing of the hall and staircase of a proposed new house near Leatherhead, designed by Mr. LEWIS P. CRACE, architect, of 71 George Street, Portman Square, W.

## FARMHOUSE, NEAR DAVENTRY.

WE give as one of our illustrations a farmhouse erected at Drayton, near Daventry, for Mr. WILLIAM ROSE HOLDEN. On the same farm have also been erected buildings suitable in every particular for a first-class stock and dairy farm. The architects are Messrs. A. B. PHIPSON & SON, of Colmore Row, Birmingham, and the builders, Messrs. ROBERTS & SON, of Weedon.

## COTTAGES AT ARDELEY.

THIS pair of cottages has been built on the estate of Mr. J. J. SCOTT, of Ardeley Bury, Herts, in a pretty situation just opposite the old village church. Local materials are chiefly used—red bricks for the ground storey walls and brown tiles for the roofs; whilst the upper storey, constructed of timber framing, is finished externally in the fashion commonly met with in the district, having the entire surface plastered over and divided up by shallow mouldings into flush panels filled with various patterns scratched on the wet plaster.

The accommodation provided in each house consists of an entrance passage and staircase, living-room, kitchen, scullery, &c., with three bedrooms. The total cost was 500*l.*, which works out at about 4½*d.* per foot cube.

Messrs. J. & G. M. BATES, of Stevenage, were the builders, and Mr. WALTER MILLARD, of 19 Great George Street, Westminster, the architect, from whose drawing our illustration is taken.

## HUMPHREYS HALL AND ALBERT GATE MANSIONS.

THE block of buildings shown in the illustration is situated at Knightsbridge. The ground-storey has been laid out for shops, the first, second, and third storeys will be let for residential flats, and the fourth for studios, &c. At the rear is Humphreys Hall, which will be used as heretofore for exhibitions. The ground-storey is constructed of Portland stone, and the upper portion of brick. The works are being carried out under the superintendence of the owner, Mr. J. C. HUMPHREYS. Messrs. ROMAINE-WALKER & TANNER, 19 Buckingham Street, Strand, are the architects.

## DESIGN FOR FREE LIBRARY, BELFAST.

WE illustrate this week the principal elevation, fronting Royal Avenue, of the Belfast Free Public Library, as designed by Mr. THOS. R. RICHARDS, architect, of 17 King Street, Cheapside, E.C., being one of the drawings submitted by him in the recent competition for the building. The original was hung in this year's Royal Academy Exhibition.

The whole of the ground-floor is devoted to the libraries and reading-rooms, with the necessary offices, no space being wasted in useless passages and corridors. The reading-room measures 52 feet by 36 feet: on the right a large hall and staircase leading to extensive picture galleries—a feature in addition to the libraries to be provided, and it is located and kept distinct on first floor. On the right of reading-room is the lending library, 37 feet 3 inches by 29 feet 6 inches; ladies' reading-room, 28 feet by 25 feet; and committee-room, the latter looking out on front. On the left is the general library, 50 feet by 34 feet 3 inches; and adjoining, looking out on front, the select library and librarian's room.

The centre room is open to the roof and has galleries round all its sides, and is covered with a glazed, semicircular iron hipped roof, 58 feet from floor in centre; the rooms at sides are 20 feet 6 inches high, divided from central hall by glazed screens, and extending to the streets bounding sides of site, and a thorough view is obtained from Kent Street to Little Donegall Street.

The first floor contains two large picture galleries, 62 feet 6 inches by 29 feet, and 50 feet by 33 feet 6 inches. The galleries are 23 feet in height to soffit of ceiling, and are added to by the large lantern lights provided. No windows are placed in these walls. The picture galleries have galleries

of communication at ends, so that a complete circuit can be made.

The building is designed for carrying out in stone, the construction, as far as possible, being of a fire-resisting character.

## WESLEYAN CHAPEL, NORMANTON.

ALL the external walls in this building are 20 inches thick of brickwork, walled hollow, and bonded in with iron stays. The facing is of pressed bricks obtained in the neighbourhood. The woodwork will be pitch pine, varnished. The building on the right of the intended chapel is the present school and chapel, and the buildings are joined together in consequence of the site being too narrow to properly detach the chapel and obtain sufficient side light. The total accommodation is for 470, allowing 20 inches for each person, and the works have been let for 1,314*l.* 18*s.*, including front fence walling, iron railing, and gates.

The works are now in hand by local builders, under the direction of Mr. WALTER HANSTOCK, A.R.I.B.A., of Batley.

## DESIGN FOR WESLEYAN CHAPEL, SOUTH CLIFF, SCARBOROUGH.

THIS design was submitted in the recent competition by Mr. WALTER HANSTOCK, A.R.I.B.A. The external walls were to be of the best quality of Yorkshire stone, strong and heavy in construction, and all the arches, columns, chancel, organ chamber arches, &c., in solid ashlar. All internal woodwork to be in pitch pine, and the roof covering in Westmoreland slating.

The greatest novelty in this plan, judging from examples of chapels in the north, is its severe following of the Church of England model, with nave, clerestories, side aisles, transepts, chancel, organ chamber, &c. In the south there are many splendid examples of this type of chapel, but in the north they are either not appreciated or understood by chapel committees, who in most cases have the entire selection of these architectural examples. The accommodation provided is for 582, and the cost about 6,000*l.*

## MODERN ARCHITECTURE.

THE article on "Architecture and Public Improvements" in the *Companion to the Almanac* for 1885 (published by the Stationers' Company), is by Professor T. Hayter Lewis. The following extract will suggest its character:—

Few of the buildings erected in Great Britain during the past year are of exceptional importance, but the general aspect of our cities is being rapidly changed in a very marked manner, as alluded to in the *Companion* of last year. Streets which, a few years since, presented nothing more pretentious than fronts of the ordinary dull brick or cement, set off with a few dressings to the windows, a cornice, and perhaps a balustrade, now furnish examples, which at once arrest attention, of light red-brick fronts, bold dormers, and lofty gables, designed with details of all kinds of style, from the Perpendicular to the Renaissance, and in a large number of cases appearing to have derived their inspiration rather from the Low Countries or the borders of the Loire than from any English type.

However inspired, there can be no doubt that the freedom obtained by such picturesque outlines and colouring as the above have resulted in many designs of great merit and individuality. But, although this has been the case when the work is in strong hands, there is much reason to fear that it will not be so when in weak hands, unrestrained by any special details.

The changes are similar both in London and the provinces. Take Leicester, for example, a good type of a Midland county town, whose great, square, ugly warehouses, and long lines of two-storeyed cottages were fearfully monotonous. But now the high-gabled new buildings in and near the Market Place, Town Hall, &c., give a life and interest to the general aspect of the town which, to those who have not visited it for some years past, affords a pleasing surprise. To accelerate the change, the speculating builder (always keen to note the direction of the public taste) has stepped in, and it may be fairly said that, by availing himself of the aid of skilful architects, he has in many cases produced very successful results, although the high-pitched gables, and the red brick and stone or terra-cotta or coloured concrete of the new work, as contrasted with the horizontal lines and the cemented fronts of the old, hard by, are often somewhat startling.

But other builders are content to rely either on their own skill or their powers of copying, and the wretched details which too often now spoil a design, otherwise good, are likely to be still more debased and more extravagantly varied when the work goes into



inferior hands. In fact, we have even in the drawings in the Royal Academy Exhibition very strong examples of this, showing broken pediments, studiously ugly dormers, strips of thin pilasters without bases, and Italian details of the most emasculated type. And even when the design for a front is good, its effect is completely spoilt when it is repeated house after house in one long row.

For the present these newly-adopted styles have scarcely been successfully used in edifices of large size. One of those—viz. the Leicester Municipal Buildings, already described—although possessing much merit in its several parts, does not present the bold general outlines and imposing mass which one associates with the architecture of the public hall of an important town.

From the accounts hereafter given in detail it will be seen that the designs for municipal and other large civil public buildings have been chiefly in the style which may be termed Classic, or Italian, or Renaissance, according to the severity or the freedom used in its outlines and details; but it must be noted that the term "Renaissance" as now used by architects seems often to have a very different meaning to that which it formerly had, and that employed by Mr. Fergusson, viz. the style used by Inigo Jones at Whitehall. The long horizontal sky-line, little broken except by an extra storey or a tower, is now varied by high roofs, lofty dormers, and massive chimneys, the balustrade (Mr. Ruskin's abomination) being well nigh a thing of the past. In ecclesiastical edifices the architects chiefly adhere to the Pointed styles.

Such, also, is the case with many of the collegiate and other scholastic buildings; but in others this has given place to the use of such mixtures of styles as is seen in, *e.g.* Inigo Jones's beautiful garden front of St. John's College, Oxford, rather than of the Perpendicular work of William of Wykeham hard by.

### THE PARLIAMENTARY COMMITTEE ON WESTMINSTER HALL.

**A**NOTHER meeting of the Select Committee appointed to consider the question of the restoration of the west front of Westminster Hall was held on the 5th inst., Mr. G. Shaw-Lefevre presiding.

Mr. A. S. Ayrton was called by the chairman to give evidence in regard to a statement which had been made by Mr. C. Barry. That gentleman had said that during his (Mr. Ayrton's) period of office, and under his direction, the clock tower of Westminster Palace was finished, or put in its present state, and New Palace Yard was dealt with as it was now to be seen. The fact was that the question of dealing with New Palace Yard was considered by Mr. Cowper-Temple, when First Commissioner of Works, and the conclusion had been come to that it was quite unnecessary for any purpose connected with the use of the Houses of Parliament to complete the quadrangle according to the designs of Sir Charles Barry.

Mr. Shaw-Lefevre: I shall lay before the Committee Mr. Cowper-Temple's answer, therefore it is only necessary for you to state that what was done was not your doing.

Mr. Ayrton: It was certainly not my doing. Mr. Cowper-Temple suggested to me what he was going to do when I was a member of Parliament, and was taking a great deal of interest in these matters. I expressed my opinion to him, and it was certainly entirely in favour of what he was going to do, so far as the abandonment of Sir C. Barry's design for the erection of a new wing in front of Westminster Hall was concerned. What was done by Mr. Cowper-Temple I looked upon as a temporary measure, and as such it was certainly very costly. The present view of Westminster Hall from the higher level of Bridge Street I consider an eyesore, but I have no doubt it could be improved by better treatment.

Mr. Dick Peddie: What would you propose in place of the railings?

Mr. Ayrton: Briefly, I should say that instead of having an iron railing there should be a substantial stone screen erected, architecturally treated outside, and of a certain height, between Bridge Street and New Palace Yard. I would bring the yard to a uniform level. These improvements I should have proposed if the necessity had arisen during my tenure of office. Seeing the inconvenience to which members are put in consequence of there being no waiting-place in New Palace Yard for carriages and horses, and taking into account the changeable nature of our climate, I would have made the inside of the screen an open cloister for use as a stand for these carriages and horses. The screen I propose would afford every accommodation and convenience.

By Mr. Dick Peddie: I always contemplated pulling down the old Law Courts as soon as the new ones were finished and fit for occupation, and so far as the utilisation of the space so rendered vacant is concerned, I do not know that anything better than Sir C. Barry's design could be adopted.

Mr. Shaw-Lefevre here observed that Mr. Ayrton had been called to give an express explanation on a certain point. Of course, if the Committee desired to hear him generally on the proposed restoration it would be competent for it to do so.

The room was cleared, and the Committee remained in private deliberation for some time. On the readmission of the public, Mr. Shaw-Lefevre announced that the Committee had decided not to examine Mr. Ayrton on the general question.

Mr. Pearson, R.A., was then recalled. In reply to Mr. Shaw-Lefevre, he said that in accordance with a suggestion the right hon. gentleman had made to him, he had prepared an alternative plan for dealing with the west front of Westminster Hall. In the new plan he proposed a building under the buttresses somewhat lower than that shown in his original design—a two-storeyed cloister, the effect of which would be to expose the whole of the windows of the Hall and to allow the buttresses to be seen. The building would be 6 feet lower than that in the original plan; it would give a gallery or corridor 8 feet high, and in the upper storey a space 16 feet high, which he had not appropriated to any special purpose. His alternative scheme also included a new building at right angles with the Hall—a building slightly higher than that originally proposed. He still adhered to the whole of his original design, but was prepared to carry out this alternative scheme if it should be the general sense of the Committee. He had read the evidence of Mr. Somers Clarke and Mr. Stevenson, and did not at all agree with it—he certainly did not approve of the alternative plan proposed by them. The building at right angles with Westminster Hall was an essential part of his plan; and as to the proposal to lower the windows of the Hall, his opinion was that it would be very undesirable to do it, and that if it were done no additional light would be obtained owing to the thickness of the wall and the flatness of the sills.

Mr. Ewan Christian stated that he had carefully inspected Mr. Pearson's plans for the restoration and considered them the best that could be made. The buttresses of the wall were in a shattered condition at the present time, and it was of the greatest possible importance that a wall should be constructed such as Mr. Pearson proposed, and such as, no doubt, originally existed. He should call this part of Mr. Pearson's plan "reconstruction" rather than "restoration." They had little evidence as to what the wall was in early times beyond the base and an indication of the height. All the intermediate part was lost, and the design for windows in the plan was, therefore, a matter of conjecture. It was difficult to make a choice between Mr. Pearson's alternative schemes, and although he approved of the lower height of the hall in that produced that day, he should have to think over it for a long time before he said that he preferred the new design to the original one. Looking at the question from an architectural point of view, the reconstruction of the wall was a prime necessity; and if anything was done for the maintenance of the Hall the wall would have to be built between the buttresses. This wall would afford a dignity which the structure in its present state required. He was of opinion that the building at right angles was necessary as a proper finish for the rest of the restoration, and there was clear evidence that a structure of that character had existed in ancient times. Altogether, Mr. Pearson's first proposal for the restoration was a very good one, although it would have been better if it had been a little higher. He considered, however, that to put a very high erection in front of Westminster Hall, shutting in that which was really a grand view of a magnificent structure, would be a grievous necessity. He could not understand how it could be proposed to shut in a handsome monument of this kind, which had played so conspicuous a part in the history of the country, by modern buildings. As for the proposal to put up a trumpery post and pan-work screen before the west front of the Hall, it was simply absurd.

Mr. A. W. Blomfield, F.S.A., stated that he had considered Mr. Pearson's plans, and admired them very much. If the west front of Westminster Hall was to be preserved, some building must be put up before it, and he thought Mr. Pearson's proposal would be much better than a temporary structure of the kind which had been spoken of. Mr. Pearson's was the only plan which would enable them to retain the evidences of the past which still existed in the west front of the Hall.

Mr. Alfred Waterhouse, A.R.A., gave similar evidence, agreeing with previous witnesses that Mr. Pearson had performed the task entrusted to him in the best possible way.

Mr. J. Oldrid Scott, F.R.I.B.A., said that Mr. Pearson's original design was the best, as adhering to all the evidences which remained of the ancient design. There could be no doubt that the original building had been a two-storey one, and had existed before the buttresses. His preference for the first plan was partly on historic grounds and partly on the ground of the superiority of the artistic treatment. There was a good deal to be said in favour of the right-angled building.

Mr. Shaw-Lefevre: Do you think the Hall ought to be as much as possible left open to view?

Mr. Scott: Yes; it is one of the merits of Mr. Pearson's plan that it leaves the west side of the noble old Hall open to view. It is now in a ragged, ruinous condition, but when restored it will be a noble building which no one will desire to have hidden.

Mr. Walter: Do you think the arguments for and against the second plan of Mr. Pearson are pretty nearly balanced from a purely artistic point of view?



Mr. Scott: I do. That plan would show more of the buttresses, and make the view more artistic.

Mr. Walter: Suppose the artistic effect of the second plan is, on the whole, better than that of the original design, and the accommodation better in the latter, would you feel a preference for the second plan?

Mr. Scott: I would not, because we are dealing with an historical building, and I think historical considerations ought to have weight.

Mr. Walter: Would you sacrifice design and beauty, which all people can appreciate to antiquarian value, which can only be appreciated by the few?

Mr. Scott: I should say the value architecturally is very small, as the building will have to be looked upon from a higher level, and would look rather insignificant. Certainly the insignificance will attach only to the cloister and not to the flying buttresses, which are the most striking part of the whole structure.

Mr. James Brooks, F.R.I.B.A., said he approved of Mr. Pearson's original plan, but thought the openings in the lower storey should not be so large by a great deal.

Mr. C. Barry, recalled, stated that since he had expressed his belief that the floor of Westminster Hall had not been raised within the memory of man he had received a letter from a Mr. Adams, some sixty years ago a clerk in the Office of Works or Woods and Forests, stating that Sir Robert Smirk had raised the level of the floor 2 or 3 feet, for the reason that the tide used sometimes to enter the Hall, obliging barristers to use boats to get to the Courts. This was some years before the fire in 1834.

The Committee again adjourned.

#### LIVERPOOL ARCHITECTURAL SOCIETY.

THE annual dinner of the Liverpool Architectural Society, at present in its thirty-seventh session, took place on the 4th inst., the president (Mr. Thos. Cook) being in the chair. The invited guests were the Mayor, Mr. P. H. Rathbone, Mr. Alderman Samuelson, the presidents of the Manchester Society of Architects, the Manchester Architectural Association, the Architectural Societies of Leeds, Sheffield, Birmingham, Nottingham, and Leicester, the Liverpool Engineering Society, the Master Builders' Association, and Mr. J. P. Seddon. From unavoidable causes some of these gentlemen were unable to be present. Among the members of the society present were Messrs. C. Aldridge, Joseph Boulton, H. B. Bare, T. D. Barry, G. Bradbury, C. W. Blease, J. P. Bradley, Thomas Cook, Alfred Culshaw, John Clarke, J. F. Doyle, S. J. Doyle, G. E. Grayson, J. W. Gibbs, C. W. Harvey, F. W. Hornblower (hon. secretary), F. W. Holme, J. M. Hay, E. Kirby, Thomas Mercer, James Montgomery, J. H. M'Govern, E. W. Hobbs, J. Rhind, Thomas Stubbs, Thomas Sheldermine, jun., C. Sherlock, Henry Sumners, W. Tomkinson, T. Wainwright, H. Weightman, C. Wise, A. G. White, J. C. White, &c.

The President, having proposed the usual loyal toasts, gave the health of "His Worship the Mayor."

The Mayor, in responding, referred to his very long connection with the building trade, extending to nearly forty years, and through that with the architects of Liverpool. Among those present he saw Mr. Joseph Boulton, who was one of his earliest remembrances, and whose health he begged to propose. In conclusion he said that the scheme which had been discussed before the society with reference to the establishment of a museum of architectural and sculptural casts at the Walker Art Gallery, inasmuch as it would tend to the advancement of the skill of the handicraftsmen of the city, had his warmest sympathy and approval.

The remaining toasts were "The Architectural Profession, and Success to the Liverpool Architectural Society," proposed by the Mayor and responded to by Mr. Boulton; "Prosperity to the Building Trade," proposed by Mr. Thomas Mercer and replied to by Mr. T. Bromley, president of the Master Builders' Association; "Kindred Societies," proposed by Mr. C. Aldridge and replied to by Mr. John Holden, president of the Manchester Society of Architects, and Mr. R. R. Bevis, jun., president of the Engineering Society; "Art," proposed by Mr. Henry Sumners, and responded to by Mr. Philip H. Rathbone, who strongly advocated the advancement in Liverpool of a collection which should illustrate the best examples of sculptural and architectural detail that it was possible to get together, remarking that it was essential that this should be done, not only from an artistic, but from a political point of view, inasmuch as the supremacy of this country in its manufactures and industries could only be maintained by the production of the highest class of workmanship, which such a school would best promote.

"Our Guests" was proposed by Mr. T. D. Barry, and responded to by Mr. J. P. Seddon, F.R.I.B.A., who expressed the great pleasure he felt in being able to render any service in the direction which had been pointed out by Mr. Rathbone, and he indicated the way in which the school referred to should be established.

The health of the President was next given, and most cordially responded to by all, after which the proceedings came to a conclusion.

#### THE LATE J. A. HOUSTON, R.S.A.

THE Royal Scottish Academy has lost another of its older members by the death of Mr. John Adam Houston, which took place at his residence, Phillimore Place, Kensington, after a long and painful illness. A Welshman by birth, Mr. Houston is understood to have had the advantage of a good education, and his art studies were prosecuted in the Board school, Edinburgh, under the direction of Sir William Allan, and where he had for fellow-students the late Mr. Jas. Drummond and Mr. Gourlay Steell. While yet a young man, he worked a good deal in Switzerland and other parts of the Continent, from which were drawn many of the subjects of his brush. The picture he first exhibited in Edinburgh was a cattle piece, produced in 1833, at which time, having been born in 1812, he must have been twenty-one years of age. From that date onward he was a regular and copious exhibitor, often submitting five or six, and sometimes as many as eight, ten, or even thirteen canvases as his annual contribution. In 1843 he was elected an Associate, and two years later a full member of the Royal Scottish Academy. In 1859 he removed to London, where he has since resided, continuing, however, a loyal supporter of our Academy's exhibitions. As illustrating the character of his practice, mention may be made of *The Bandit's Outlook* and *Don Quixote in His Study*, 1836; *A Fouth of Auld Nicknackets*, a highly characteristic specimen, 1838; *The Herd Boy's Sabbath* and *An Incident of the Crusades*, 1841; *Luther and Melancthon Translating the Bible*, 1843; *The Good Samaritan* (a diploma picture now in the National Gallery), and *The Jew Curiosity Dealer*, 1845; *The Secreting of the Regalia of Scotland*, 1846; *Benvenuto Cellini*, 1848; *The Prodigal Son*, 1849; *A Border Raid*, 1850; *The Fruit Seller*, 1854; *Sancho Panza and the Squire of the Wood*, 1855; *Ophelia*, a very striking picture, 1857; *The Lookout*, 1859; *The Standard Bearer*, 1871; *The Watch on the Moor*, 1872; *The March of Montrose down Ben Nevis*, one of the largest pictures he ever painted, 1878; and *Past Service*, curiously enough, in 1884. He was specially fond of painting pictures of a military character, in the costume of the Elizabethan period, and of the armour of that time, with a view to the filling in of pictorial accessories, he had formed a fine collection. His style was smooth and somewhat artificial; and, alike in landscape and figure painting, he had a predilection for minute detail and careful finish. As a painter in water-colour he held a creditable position among the English practitioners of that art. Mr. Houston is survived by a widow and family.

#### EMPIRICISM IN ART.

TWO lectures have been delivered by Professor Knight, of St. Andrew's University, at the Edinburgh Philosophical Institution, on "Empiricism and Idealism in Literature, Art, and Life." The lecturer said it was his aim to show how the spirit of idealism had found expression in literature and art, and before carrying the principle further, and applying it to some other spheres of human activity, he wished to return to the subject of art. Art in all its sections dealt with the beautiful—not, however, with beautiful things only, in their separateness and fragmentariness, but with beauty in itself, with the beautiful as a unity. According to this doctrine there was nothing essentially excellent or inherently admirable. The difference between what happened to be agreeable and what was in itself beautiful was ignored by sensation. Idealism in art affirmed that there was but one absolute standard of the beautiful which all endeavoured to reach, but to which none fully attained. He affirmed, without fear of contradiction from the competent critic, that there was no art in the eighteenth century worthy of the name; but, when the encyclopædists were supreme dictators in mental science and literature, art became of necessity mechanical and prosaic. Its ideal features vanished; it became formal, technical, rigid, and frigid in its exactitude. The eighteenth was, of all modern centuries, the one in which empiricism distinctively flourished; the period in which idealism flourished most was from the fourteenth to the sixteenth century. Empiricism was always magnifying experience. Let them go to experience and test experience or empiricism in art. Let them go into any modern art gallery—into their own Royal Scottish Academy—and it did not require one to have mastered Plato's philosophy of the beautiful, or to have read all Mr. Ruskin's works interpreting the art of mediæval and modern painters, to be able to tell at once in each year's catalogue what pictures were inspired by idealism and what were not—whether they were landscape or figure paintings. Briefly, in landscape, the most perfect picture was not a mere imitation of nature, or semi-photographic reproduction of it; it was rather a divination of its meaning—a revelation of its latent soul. Pictures such as those by Turner—by far the greatest land-



scape painter that ever existed—were the outcome of idealism or idealistic vision in art. Similarly in portraiture, the most perfect resemblance was not an exact reproduction of the outward appearance of the human face or figure. It was not even a transcript of one particular mood, but is the blending of many different moods into a likeness in which expression was all dominant, and which combined in a unity what the character in question had revealed on many different occasions, and was therefore a true interpretation of the man behind the mask of his physiognomy. If art were the mere imitation of nature, he thought that many would discard it, and would prefer the thing it imitated—nature itself. The truth was that highest art always led through nature to a higher reality that could never be embodied on canvas, or disclosed to any of the senses. Proceeding to deal with the two tendencies in musical art, the lecturer said it was quite true that in music there were not the same sharp lines of contrast drawn as in poetry, or painting, and that in many a sonata, oratorio, or opera even, there was much of both tendencies. The reason perhaps was that music was so delicate and subtle a vehicle for the expression of emotion that there were of necessity mixed effects in almost every great musical creation. After alluding to the two tendencies—idealistic and empirical—on individual and national character, Professor Knight concluded by remarking that each of the two tendencies was essential to the other, and that though often opposed, often in violent hostility and struggle, they were inseparable one from the other, and necessary each to each.

### INTERNATIONAL INVENTIONS EXHIBITION.

THE applications for space have now all been examined by sub-committees of the Council, and a selection has been made of the most promising. The number of applications has been so great that it has been decided to limit very strictly the admissions in those classes which may be considered to have been fully represented in the exhibitions of the present and of the past year. The Council will, therefore, be obliged to refuse many valuable exhibits in such classes as those relating to food, clothing, and building construction. It will even be a difficult matter to accommodate those which have been selected, and it is feared that the list will have to be still further reduced. As soon as possible, information will be sent to those who have applied for space; but the enormous number of applications, far in excess of what was expected, have made it impossible to do this up to the present.

The Guarantee Fund now amounts to 48,280*l.*, a sum considerably in excess of that subscribed for the Health Exhibition, or for the Fisheries, the amount for the former being 26,518*l.*, and that for the latter 26,656*l.*

### THE PROPOSED HISTORICAL MUSEUM IN LIVERPOOL.

A LECTURE was delivered at the Rotunda Lecture Hall, Liverpool, on the 5th inst., by Mr. J. P. Seddon, F.R.I.B.A., on "The Proposed Historical Museum for Liverpool of Sculptural and Architectural Casts." It was illustrated by the oxyhydrogen light.

Sir James Picton presided. He said the circumstances under which they were met were of a very interesting and encouraging character. They were all familiar with the magnificent building in part of which they were then assembled. Most of them were acquainted with its history, how it began from a very small inception and had gradually increased. There had been some opposition, but he was happy to say a great deal of encouragement, and one department after another had been added to it until it had reached its present development. It began, as they were aware, with a library, not upon a large scale. That grew into a museum of natural history. Then came the magnificent Mayer collection of ancient art, and to that was added the Walker Art Gallery and its splendid collection of pictures and artistic associations, and now a further step forward was proposed, and for that they were indebted to their excellent friend, Mr. P. H. Rathbone. They all knew he was an earnest, eager student of art, and had done very much to promote its success in this locality. Mr. Rathbone had taken up a new point of departure. Art consisted not merely of painting, not merely of modern sculpture, but there was a vast field for study and improvement in casts of art of ancient times. Many of those were very precious to lovers of art and those who had studied its history from a large number of them. Many of them had no opportunity of going abroad to see objects of that kind. At South Kensington there was perhaps the most magnificent collection of objects of art, procured from all quarters of the world, and beyond these objects themselves there was a large collection of casts. What Mr. Rathbone had proposed was to obtain as far as they could—not perhaps to the same extent; it could scarcely be expected that could be done—a similar collection upon as large a scale as possible. When they wanted to enlarge the Art Gallery, in consequence of pressure upon their space, from 11,000*l.* to 12,000*l.* was required. That would have had to come

out of the city funds, and he must give credit to the Council that they met the committee very handsomely, and set aside a sum of money which would have defrayed all the expense. Then Sir Andrew Walker came forward nobly and generously, and gave 11,700*l.* to defray the expense of the enlargement of that building. That money having been set aside for the purpose of that erection, it would seem certainly natural and proper that the money should be laid out in a way to promote that institution in its usefulness, and what Mr. Rathbone wished was that it should be applied for this collection of casts, which he had been so anxious to establish. The money which had to be laid out was the property of the citizens of Liverpool, and their opinion on the subject would no doubt have great weight when it came to be discussed in the Council.

### YORK ARCHITECTURAL ASSOCIATION.

THE third session of the York Architectural Association was inaugurated on the 5th inst. by a conversazione in the water-colour galleries of the Yorkshire Fine Art and Industrial Institution. The guests were received by the president of the association (Mr. Arthur Pollard) and the hon. secretary (Mr. B. Priestley Shires).

The President said he regretted that there was not a larger competition for prizes. The successful competitors were as follows:—Class for design and construction—1. Mr. George Henry Nelson; 2. Mr. George Armstrong. Study of perspective—Mr. George H. Nelson. The President, in his address, said that architecture had through all ages been the reflex of the condition and well-being of nations, it having been produced and perfected under the varying conditions of man's life. It had ever spoken accurately of the progress of civilisation, and was therefore undoubtedly history in stone. As man in his primitive state produced primitive dwellings, so as he improved in civilisation his house would assume more perfect form. But it was certain that these improvements made slight progress, requiring ages to produce buildings which would take the form of any decided style which truly described the name of architecture. With the progress of civilisation art gradually acquired an established condition. This, however, usually occurred in metropolitan cities, where there was great pressure of life, conflict of thought, and the highest amount of intelligence. Temples, temple palaces, and religious edifices took the lead in architectural development, and the religious buildings in the early days showed this to be the rule. He then glanced at the architecture of the Egyptians, the Assyrians, the Persians, the Greeks, the Hindoos, the Chinese, and the Italians, and asked—What would have become of ancient Greece and Rome if the Parthenon at Athens and the immortal works of Phidias had been destroyed? The result would have been, he said, that we should have lost half of our knowledge of the intellectual culture of the Greeks. It was their monuments, their sculpture, their temples, and their edifices which had handed down their reputation and glory to our day, and, moreover, from those buildings, step by step, the architecture of Rome and Italy, and indeed every civilised country, had principally come.

### SOCIETY OF ANTIQUARIES OF SCOTLAND.

THE first monthly meeting of the Society of Antiquaries for the present session was held on Monday, Dr. Arthur Mitchell, vice-president, in the chair. The first paper read was an account of some excavations recently undertaken for the Society by Dr. William Traill of Woodwick, in the island of North Ronaldsay, Orkney. The first place opened, a mound at Stenabreck, was found to cover the ruins of an ancient dwelling, consisting of several rooms separated from each other by very thick partition walls, and the outer walls, which were very rude, apparently banked up with earth. The door seemed to have turned on a pivot, and the socket-stone remained in its place. A key made of bone, after the fashion of the wooden keys used for the old Orkney wooden lock, was also found close by the doorway. In several of the rooms there were presses in the wall. The articles found consist chiefly of bone implements and pottery. The other mound excavated, at Howmae, appears probably to cover the ruins of a building of the same age as the brochs. It is an extensive structure, and as yet only a few of the outer chambers have been cleared. They have yielded a large collection of bone implements and pottery, with a few implements of stone. Ground plans and sections of the structures excavated were exhibited to the meeting. Dr. Mitchell, Sheriff Thoms, Professor Duns, and others took part in the discussion that followed. A special vote of thanks was given to Dr. Traill. The second paper was a notice of two vessels of grey-coloured stoneware, styled bellarmine or greybeards, by Mr. John J. Reid. The larger of the two greybeards had a very curious history. It was found filled with quicksilver, and buried in the soil in the island of Fetlar, in Shetland, having been exposed to view by the washing away of the soil after a storm. The smaller of the two was found in digging the foundations of a house at Eyemouth in 1863. They



both belonged to a class of Mediaeval pottery of considerable interest, from its associations as well as from its special characteristics. Among the most ancient remains of Egypt and Greece there was a type of jug not very dissimilar, and Mexico and Peru furnished us with allied specimens. There were allusions in the Roman literature to what are called in the north of England "boggle" drinking-cups; and in our own literature the allusions to such vessels refer to the period of Elizabeth, James I., and Charles I. No doubt, if it were true that these grotesque vessels represented a caricature of the face and figure of Cardinal Bellarmine, the reason of their popularity in this country was obvious. The earlier examples were of much finer workmanship than the so-called bellarmines, which continued to be made in Holland down to a recent period, and are, indeed, now being reproduced in several of the pottery works in Germany from the old designs. An imitation of the old Continental manufacture was made at Fulham in the end of the seventeenth century. The next paper was a description of a cist containing an urn recently discovered at Bruach, Glenlyon, Perthshire, by Mr. Charles Stewart, Killin. The fourth paper was a notice by Mr. J. M. Gow of some stone circles and cup-marked stones on the Hill of Findowie, in Strathbran, Perthshire. The paper was illustrated with drawings by Mr. Gow. The last paper was a notice by Dr. Joseph Anderson of an enamelled cup or patera, found many years ago in Linlithgowshire, and now acquired for the museum. It is a shallow bowl-shaped vessel of bronze,  $4\frac{1}{2}$  inches in diameter and  $2\frac{1}{2}$  inches deep, with a flat handle attached,  $3\frac{1}{2}$  inches in length. Dr. Anderson also exhibited a set of full-sized drawings of five bronze swords, a spear-head, and scabbard-chape, recently ploughed up in Kintyre. The drawings, which were of the actual size of the objects, were executed with great skill and fidelity, and the hoard of bronze objects was one of the most interesting ever found in Scotland.

### THE ROYAL ACADEMY.

THE prizes obtained by the students of the Royal Academy Schools were distributed on Wednesday night by the President. There was a large attendance of members of the Academy and students.

Sir Frederick Leighton said that although the occasion was not one on which the highest honours offered to students by the Academy—namely, the gold medals and three scholarships—were awarded, the members, to whom the general growth and average work of the schools were of even greater importance than the productions of individuals, however brilliant, regarded such celebrations as yielding in no degree in interest and significance to the more showy and striking displays of the alternate years. The general impression of the members of the Academy was that as a whole the competition this year was a satisfactory one. The average standard of merit had been in the majority of classes thoroughly well sustained, and in two or three it had been raised. The members derived special satisfaction from the figure paintings taken from life, for which they had found it necessary to bestow an extra medal. He gave equal praise to the sculptors' competition—the modelling of a figure from life. The progress made by the students in this fascinating art since the establishment of the new school of modelling was, in spite of the inadequate and he hoped only temporary lodgment of that school, such as to afford him the deepest satisfaction. The improvement shown last year in the class of sketch design in modelling had been more than maintained, and here again the Academy had felt bound to make three awards instead of two. The Armitage designs in monochrome for a figure picture were better than they were last year. Nevertheless it was in this class of designing, more especially as applied to mural decoration, that he earnestly hoped yet to see considerable progress. His great desire was to find among the students a keener sense of the decorative properties of art, using the word in its highest sense—a keener appreciation of arrangement in form and of monumental dignity in aspect. With respect to the cartoons of a draped figure he saw this year, as on former occasions, a tendency in a straining after picturesqueness and dramatic incident rather to lose sight of the object for which this competition was instituted, namely, the study of drapery as a mode of expression through form rather than through light and colour. The architectural competition this year was very limited, owing, no doubt, in a great measure to circumstances and arrangements which he, personally, considered regrettable, and which he trusted would not be permanent.

The secretary (Mr. F. A. Eaton) then read the names of the successful students, all of whom were loudly cheered as they came forward to receive their prizes from the President. The list was as follows:—Landscape Painting, Creswick Prize (30%), Ernest Thos. Lingwood. Painting of a Figure from the Life, silver medals, 1st, Arthur John Foster; 2nd, Herbert Sidney Percy; extra, John Ernest Bruen. Painting of a Head from the Life, silver medals, 1st, Thomas E. Garvie; 2nd, Theodora Joan Noyes. Copy of an Oil Painting, silver medals, 1st, not awarded; 2nd, T. Leonard Hughes. Copy of a Landscape, silver medal, Frederick Everett. Cartoon of a Draped Figure (silver medal and 25%), Herbert Sidney

Percy. Design in Monochrome for a Figure Picture, Armitage Prizes, 1st (30% and bronze medal), Chas. Douglas Richardson; 2nd (10%), Joseph L. Davis (who, however, was debarred from actually taking the prize as he won it in 1881). Design for the Decoration of a Portion of a Public Building, prize (40%), Walter Stanley Paget. Drawing of a Figure from the Life, silver medals, 1st, John Ernest Bruen; 2nd, William Hy. Margetson. Set of Six Drawings of a Figure from the Life, 1st prize (50%), Arthur Trivethin Nowell; 2nd (25%), William Hy. Margetson; 3rd (15%), Sidney Paget; 4th (10%), Herbert Sidney Percy (the latter was, however, disqualified, as he received a superior prize in the same competition last year.) Drawing of a Head from the Life, silver medals, 1st, Nelly Erichsen; 2nd, Minnie Jane Shubrook. Drawing of a Statue or Group, silver medals, 1st, William Farran Littler; 2nd, Victor Hobson; Drawing of a Statue or Group, prize (10%), T. Leonard Hughes. Perspective Drawing in Outline (open to painters and sculptors only), silver medal, Fred. Cayley Robinson. Model of a Design, 1st prize (30%), Chas. Douglas Richardson; 2nd (10%), Frederick William Pomeroy; extra (8%), Arthur George Walker. Set of Three Models of a Figure from the Life, 1st prize (50%), Frederick William Pomeroy; 2nd prize (20%), Henry Alfred Pegram. Model of a Figure from the Life, silver medals, 1st prize, George James Frampton; 2nd, Arthur George Walker. Restoration of a Mutilated Antique Statue, no competition. Model of a Statue or Group, silver medals, 1st, not awarded; 2nd, William Henry T. Venner. Model of a Statue or Group, prize (10%), William Goscombe John. Design in Architecture, travelling studentship (60%), Frederick Simpson. Set of Architectural Drawings, silver medals, 1st, Edmund Harold Sedding; 2nd, Henry D. Walton. Set of Architectural Designs (Upper School), prize (25%), J. Attwood Slater. Set of Drawings of an Architectural Design (Lower School), prize (10%), Edward Guy Dawber. Perspective Drawing in Outline (open to architects only), silver medal, Samuel Bridgman Russell. The Landseer Scholarships in Painting and Sculpture, of 40% a year each, tenable for two years, given for the best work done in the examination for passing into the second term of studentship, were awarded to Herbert Sidney Percy and William Toogood.

### THE CITY COMPANIES.

#### 5. The Plaisterers' Company.

THE Plaisterers' Company, which ranks as forty-sixth among the eighty-nine companies, was incorporated by King Henry VII., on March 10, 1501. It was to search, and try, and make, and exercise due search as well in, upon, and of all manner of stuff touching and concerning the Art and Mystery of Pargettors, commonly called Plaisterers, and upon all work and workmen in the said art or mystery, so that the said work might be just, true, and lawful, without any deceit or fraud whatsoever within the City of London, or suburbs thereof. The charter gave power to establish the company as the Guild or Fraternity in honour of the Blessed Virgin Mary, of men of the Mystery or Art of Pargettors in the City of London, commonly called Plaisterers, to be increased and augmented when necessary, and to be governed by a master and two wardens, to be elected annually. The master and wardens and brotherhood were to be a body corporate, with perpetual succession and a common seal, and they were empowered to purchase and enjoy in fee and perpetuity lands and other possessions in the City, suburbs, and elsewhere. And the charter empowered the master and wardens to sue and be sued as "The Master and Wardens of the Guild or Fraternity of the Blessed Mary of Pargettors, commonly called Plaisterers, London."

The Company, under the powers to make examinations, appears to have inflicted fines on offending parties for using bad materials, and for bad workmanship. Search days appear to have been annually appointed up to 1832, but not since, and the company has not exercised any control over plaisterers' work for many years.

Another charter was granted by Queen Elizabeth in 1559, but it has been lost, and there is no record of the contents. The Queen granted a new charter in 1597, which confirmed the privileges of the company, and extended the authority of the master and wardens to and over all persons exercising the art of plaisterers, as well English as aliens and denizens inhabiting and exercising the said art within the City and suburbs and liberties, or within two miles of the City.

Charles II., by a charter dated 1679, confirmed the privileges granted by the previous charters. Having in view the rebuilding of the City, he forbade any person to carry on simultaneously the trades of a mason, bricklayer, or plaisterer, and to exercise or carry on the art of a plaisterer without having been apprenticed seven years to the mystery. The jurisdiction of the company was extended to three miles' distance from the City. On October 19, 1694, the Common Council passed an act compelling all persons using the trade of a plaisterer within the City or liberties of London to become free of the company under penalties.

The Plaisterers do not appear to have restricted themselves to the mystery of Pargettors. In 1579 and 1585 two orders were



made by the Court of Aldermen for settling matters in dispute between the tilers and bricklayers and the plasterers, as to interfering in each other's trades. The observance of these orders was enforced by an order of the Privy Council, dated June 1, 1613, and a general writ or precept issued to the same effect on August 13, 1613.

The Painters suffered from the encroachment of the Plasterers. In the charter of James II. to the Painters-Stainers, we find the following:—

The said Act reciting that the plasterers within the City of London, using nothing but lathing, daubing, plastering, and limeing, did and yet do procure thereby for themselves and their families a convenient living and maintenance; yet not satisfied with that reasonable living, that they do make of their said proper faculties, wherewith and wherein they have been brought up as apprentices, have now of late used and practised the art or mystery of painters-stainers, as well with oil colours as size colours, and that since the making of the said Letters Patents more usually than in former times they have used or did whereby, not only many of the said art or mystery of painters, who have well and honestly as apprentices to the same served for the space of seven years and upwards, and by their labours and industries have attained to the full and perfect skill and knowledge thereof, are not only disabled to get a competent living thereby for the relief of themselves, their poor wives and children, but also that the said plasterers, not having been trained up in the said art or mystery of painting, neither can or do make any such good work or such true and perfect colours as others having been trained up in the said trade as apprentices thereto, and yet utter the same for good and perfect colours, and being no freemen of the painters-stainers, escape therefor unpunished, to the great deceit and abuse of His Majesty's most loving subjects; and whereby the said art or mystery of painting was likely in such sort in short time to decay, as there will not be sufficient workmen of skill in and about the said city to serve in the said art His Majesty, or any other His Majesty's subjects for remedy; whereof it was enacted by the authority of that present Parliament, that from and after the 29th day of September, which was in the year of our Lord God 1606 next after the end of that session of Parliament, no manner of person or persons being or pleading to be a plasterer, or thereafter to become or to be a plasterer, or which should be a servant or sett on work by any plasterer, should use, exercise, or set up the art or mystery or manual occupation of a painter, commonly called a painter-stainer, or any part thereof within the City of London or the liberties or suburbs of the same, or should within the same places aforesaid make any manner of work or works, or lay any manner of colour or colours or painting whatsoever in the said art or mystery of painters-stainers aforesaid, at anytime before occupied or used, unless he or they be or should be the servant or servants, apprentice or apprentices of a painter, otherwise called a painter-stainer, or had served or should serve as an apprentice or apprentices by the space of seven years at the least to a painter-stainer, upon pain that every such person or persons as should or did offend contrary to the true intent and meaning of the said act, should forfeit for every time that he or they should so do or offend, the sum of 5*l.* of lawful money of England. . . . And forasmuch as we are informed that the plasterers in and about the cities of London and Westminster, notwithstanding that in and by the aforementioned and recited Act of Parliament they were allowed to lay and use the six colours in and by the said Act mentioned, and that mingled with size only, and not with oil, and not to make any work or works, painting or paintings, yet they and the major part of them, contrary to the true intent and meaning of the said Act, do with the said six colours, and otherwise by glazing of them over with oil and varnish, work at and exercise the art and mystery of a painter, alias painter-stainer, in divers several works, painting and paintings, and other things properly belonging to the art and mystery of a painter, alias painter-stainer, by means whereof much bad work is made and wrought and which turns to the detriment, hurt and damage of our subjects in general, and particularly to the utmost ruin of the said Company of Painters, alias Painter-Stainers, of our said cities of London and Westminster, the suburbs and liberties of the same, and within six miles compass on every side thereof for remedy whereof, and to prevent the like for the future, and to the intent that the said art or mystery of painters, alias painter-stainers, may be in every respect truly and artificially wrought and exercised, our Royal will and pleasure, is and we do hereby strictly charge and command that no plasterer or plasterers, nor any other person whatsoever do or shall at any time or times hereafter presume to take upon him to work at, use or exercise, the art or mystery of a painter, alias painter-stainer, in any work or in any painting or paintings, or in any other thing belonging to the said art or mystery of painter, or to glaze, oil, or varnish over any work or works made of or mixed with any of the said six colours before mentioned, unless such person hath, or hereafter shall have, served the term of seven years as an apprentice to the said art or mystery, alias painter-stainer, upon pain of forfeiture for every such offence of the sum of five pounds of lawful money of England.

The governing body consists of a master and two wardens (an upper and a renter warden) and a Court of assistants, as directed by the charter. The qualification for membership of the governing body is to be on the livery of the company. The master presides at all meetings of the Court of assistants. The fee now paid by the master on his election is ten guineas. No fee is payable by the upper warden on election. A fee of twenty-five pounds is paid by the renter warden on his election. Each member of the Court of assistants attending a Court receives two pounds.

Any person can become free of the company by redemption, patrimony, or servitude. The grades are "freemen," "liverymen," and "assistants." Women are not admitted to membership. The fees payable on redemption are 5*l.* 5*s.*; by patrimony or servitude,

1*l.* 16*s.* 6*d.* The members of the company are not of any particular trade. About twelve plasterers are members of the company. The qualification for election to the livery is to be a freeman. The Court of assistants elects. Freemen are proposed and seconded by members of the Court. The fees now payable are 30*l.* to the Court, 1*l.* 1*s.* to the clerk, and 10*s.* 6*d.* to the beadle. Only one apprentice has been bound under the auspices of the company during the last ten years.

## THE METROPOLITAN SEWAGE COMMISSION.

THE second and final report of the Commission appointed in 1882 to investigate the system under which sewage is discharged into the Thames has been published. In their first report the Commissioners considered the system itself, and whether any evil effects result from it. The second report is devoted to the measures which can be applied for remedying or preventing the evils.

A *résumé* is given of the attempts which have been made during the past thirty years to solve the problem of sewage utilisation. The conclusion arrived at is that, although the most modern scientific knowledge and experience may be brought to bear on sewage disposal, the solution is a matter of extreme difficulty, and there still exists a popular prejudice against sewage works, which, even if less well-grounded than is generally supposed, must not be disregarded.

The Commissioners have held eighty-one meetings, at which twenty-seven witnesses were examined. Visits were also made to various towns where sewage treatment is practised. But after obtaining the opinions of the best living authorities, and comparing them with the mass of documentary information which has been collected, the Commissioners are compelled to express their regret at the obscurity in which the subject is involved after so many years' study and discussion, and after the large experience that has been gained.

The first question to be considered is the separation of sewage from rainfall. It is one of much importance. If the sewage is to be used on land, or treated chemically, its concentration and uniformity are highly desirable; and if it is to be carried further away by a long conduit, its volume should, from motives of economy, be reduced to a minimum. For these reasons the separation ought to be effected, as much as possible, in future extensions of the metropolitan drainage system.

At one time it was supposed that sewage was a valuable manure, and that the price received for it from farmers or the profits from public sewage farms would be sufficiently large to diminish the taxation of towns. The opinion of experts is generally opposed to that theory. Alderman Avery, who has had a great share in the management of the Birmingham sewage farm, believes that every 7*s.* 6*d.* obtained costs rather more than 7*s.* 6*d.* to produce. At Croydon, in spite of the favourable position of the town and the porous nature of the soil, the loss has been as much as 12,000*l.* a year. Sir Frederick Abel says it is impossible to deal with the sewage in reference to its manurial value. Sir John Lawes considers that nothing is gained by the distribution of sewage to land. At Doncaster four engineers took the sewage farm from the Corporation on a fourteen years' lease. After twelve years' experience, it has been found that the value of the sewage is about 300*l.* a year, or just the cost of the pumping. There can be no doubt that the preponderance of the evidence is against the idea that the sewage of the metropolis can at present be applied by irrigation so as to be a source of profit to the ratepayers. There is still less hope of profit by attempting to extract manure from the sewage by depositing or precipitating processes.

But if the disposal of the sewage is to be undertaken as a necessity, and without much regard to profit, the next question is, what is to be done with it? The most natural way is to apply it to the land as a liquid manure, when the noxious and offensive elements are either appropriated to the crops or are detained in the soil, and are changed into innocuous matter. For this purpose a large area of land is required. According to Sir Robert Rawlinson, 36,500 acres is necessary if the metropolitan sewage is treated on the "broad irrigation." Mr. Robinson estimates the area at 29,000 acres; Colonel Hope at 50,000 to 100,000 acres; Dr. Frankland at 50,000 acres; Messrs. Bidder, Hawksley, & Bazalgette at 95,000 acres; and Messrs. Hoffman & Witt at 100,000 acres. The Commissioners say that later experience has reduced the quantity of land, and it is usual to estimate for broad irrigation one acre to about 100 persons. For a population of 4,000,000 the area required would be about 40,000 acres, or 62 square miles. Whether so much land could be obtained has not been considered by the Commissioners. The land would be costly, and in addition there are the expenses for laying-out the land, for conducting the sewage to it, and for bringing back the effluent to the river.

A lesser quantity of land would be needed if filtration through porous soil could be made the principal instead of an incidental process of sewage treatment. The Rivers Pollution Commissioners have offered several objections to the process. They assert that filtration is wasteful, as not fitted for producing crops,



that the concentration of so large an amount of sewage, on a small area, will produce greater nuisance than any other modes of treatment, that the soil will lose its filtering power, that the cost is too great for adoption, and that the success of the process would be doubtful with ordinary management on a large scale. On the other hand, the Metropolitan Sewage Commissioners consider that the process of filtration has great scientific merit, and offers valuable practical advantages for the disposal of sewage in situations where broad irrigation is impracticable, and where land suitable for filtration can be obtained. It is, however, desirable that the sewage should be previously treated by some efficient process for removing the sludge.

Chemical substances have been employed from time to time to cause speedy precipitation of the sewage. A patent for treating sewage with lime was obtained in 1846, and works for the purpose were established at Tottenham and Leicester. The deposit was made into slabs or "bricks," which were supposed to form a valuable manure. But they were found to be unsaleable, and the proprietors suffered great loss. Many modifications of the system have been attempted, and between 1856 and 1875 over four hundred patents have been taken out. Salts of iron or of alumina; lime, gas-tar, and chloride of magnesium; "black ash waste"; charcoal, blood, and clay are among the precipitants which have been used. The Commissioners say that the adoption of a precipitating process would diminish the existing nuisance in the Thames, and lessen the tendency to deposit foul banks and shoals, although it would not effectually purify the river. The cost is estimated at 200,000*l.* a year.

In Birmingham precipitation is supplemented by application of the sludge to land. The sewage is treated with lime, and allowed to deposit in a series of large tanks; the clarified liquid is then passed through porous land, after which it runs into the river, being found perfectly innocuous. The farm contains about 1,200 acres, and 900 acres are used for the filtration and sludge treatment. The crops produced are above the average, and the land is constantly improving and becoming more fertile. Land and works have cost 400,000*l.*, while the annual expenditure is 49,680*l.* As the income received from the farms is 16,403*l.*, the net annual expenditure is 33,277*l.*, or a little more than 1*s.* 1*d.* per head of the whole population. The Birmingham plan is, according to the Commissioners, one of the most feasible means of solving the metropolitan difficulty.

Several witnesses in the late inquiry have suggested that the most efficient remedy is to remove the outfalls further away from London, and there are two plans for taking the sewage to the open sea. The Commissioners say that it is not expedient that the sewage of the metropolis should be discharged in its crude state into any part of the estuary of the Thames, from the Nore upwards. But if properly clarified by separation of its solids, the sewage might be discharged into the lower part of the estuary below Hole Haven without serious nuisance. Mr. Baldwin Latham says that the only effectual way is to take the sewage straight out to sea and discharge it in deep tidal water, and that it would be cheaper to spend five or six millions on the outfall than to carry out any precipitation process. Messrs. McLean & Stillman and Messrs. Bateman & Hemans prepared plans by which the sewage would be carried to the Essex coast.

The following is a summary of the conclusions arrived at by the Commissioners, and of their recommendations:—

1. The evils described in the first report, as resulting from the present system under which sewage is discharged into the Thames by the Metropolitan Board of Works, still continue, and these evils imperatively demand a prompt remedy.
2. It is neither necessary nor justifiable to discharge the sewage of the metropolis in its crude state into any part of the Thames.
3. Some process of deposition or precipitation should be used to separate the solid from the liquid portions of the sewage.
4. Such process may be conveniently and speedily applied at the two present main outfalls.
5. The solid matter deposited as sludge can be applied to the raising of low-lying lands, or burnt, or dug into land, or carried away to sea.
6. The entire processes of precipitation and dealing with the sludge can be, and must be, effected without substantial nuisance to the neighbourhoods where they are carried on.
7. The liquid portion of the sewage, remaining after the precipitation of the solids, may, as a preliminary and temporary measure, be suffered to escape into the river.
8. Its discharge should be rigorously limited to the period between high water and half ebb of each tide, and the top of the discharging orifice should not be less than six feet below low water of the lowest equinoctial spring tides.
9. By these means much of the existing evil will be abated.
10. The liquid, so separated, would not be sufficiently free from noxious matters to allow of its being discharged at the present outfalls as a permanent measure. It would require further purification; and this, according to the present state of knowledge, can only be done effectually by its application to land.
11. In the case of the metropolis, the best method of applying the liquid to land, with a view to its purification, would be by intermittent filtration. Sufficient land, of a quality suitable for this purpose, exists within a convenient distance of the northern outfall. The liquid portion of the sewage would be pumped up to this land from the separating works, and, after filtration, would be conducted

to the river. Whether suitable land in sufficient quantity can be found in convenient positions near the southern outfall has to be ascertained. If not, the liquid must be conveyed across to the north side by a conduit under the river. If suitable land, in sufficient quantity, and at reasonable cost, cannot be procured near the present outfalls, they recommend that the sewer-liquid, after separation from the solids, be carried down to a lower point of the river, at least as low as Hole Haven, where it may be discharged. In this case it will also be advisable that the liquid from the southern sewage should be taken across the river, and the whole conveyed down the northern side. It may be found that the separating process can be effected more conveniently at the new than at the present outfalls; this will depend on various considerations of cost and otherwise. If the outfalls are removed further down the river, the main conduit or conduits may, if thought desirable, be made of sufficient capacity to include a general extension of the drainage to the whole of the districts round London, as recommended by Sir Joseph Bazalgette and Mr. Baldwin Latham. In new drainage works, the sewage should be, as far as possible, separated from the rainfall.

## LEGAL.

### In the Supreme Court of Judicature—Appeal Division.

(Before MR. JUSTICE MATHEW and MR. JUSTICE DAY.)

#### TEMPORARY ERECTIONS.

This was an appeal, by way of special case, from the decision of Mr. Marsham, the magistrate sitting at the Woolwich Police Court, by the Metropolitan Board of Works, complaining that Messrs. Anthony & Co., of Lonsdale Chambers, Chancery Lane, did on the 15th day of February, 1883, unlawfully erect a movable or wooden erection for the purpose of exhibiting advertisements at the Marquis of Granby public-house, New Cross Road, Greenwich, contrary to 45 Vic. c. 14, s. 13.

After several adjournments owing to illness, the summons was finally heard on May 3 last; the same was dismissed by the learned magistrate on the ground that the erection, having been completed six months before the summons was taken out, the Board were out of time in taking their proceedings under Jarvis's Act, 11 & 12 Vic. c. 43, s. 11.

Against this decision the Board now appealed, Mr. Besley and Mr. Ivory, assisted by Mr. Richard Burton, appearing for the appellants, and Mr. Fox for the respondents.

After the arguments on both sides, the Court decided that the offence was a continuing one, and gave judgment in favour of the appellants with costs. Case to be remitted back to the magistrate to inflict penalties, and the magistrate to take into consideration, in doing so, that if the respondents would undertake to remove the erection the penalties should be mitigated.

#### High Court of Justice.

(Before VICE-CHANCELLOR BACON.)

SHILLITO AND OTHERS *v.* THOMAS LARMUTH & CO.

"THE MANCHESTER GRATE."

This was an action brought against the defendants for infringing the plaintiffs' Letters Patent for grate backs, commonly known as "The Manchester Grate."

The plaintiffs complained that the defendants had infringed their Letters Patent for the invention of "an improvement in grate-backs, for increasing the efficiency of sham register and other firegrates," by the sale of a grate-back under the name of "Rocke's Patent," and they prayed for an injunction to restrain the defendants from selling any grate-backs in infringement of their patent, and from issuing a circular advertising an infringing grate-back under the name of "Rocke's Patent."

His Honour the Vice-Chancellor granted an interim injunction restraining the defendants until the hearing of the action, and ordering an inspection of the grate-backs at the defendants' works.

On Monday, November 24, 1884, the Vice-Chancellor ordered a perpetual injunction restraining the defendants from further infringement, or from issuing the above circular, and ordering them to pay the plaintiffs' costs of the action.

## CHURCH BUILDING AND RESTORATION.

**Islington.**—The church of St. Peter, Islington, erected about forty years ago by Sir Charles Barry, has lately undergone considerable repairs and alterations internally. The floor, which was attacked by dry rot, has been removed, and the entire church has been refloored. The eastern portions of the north and south galleries have been removed, and also the children's galleries in the transepts and west end. A centre and side aisles have been formed instead of two side aisles as formerly. Seats for the choir, with the pulpit and desks, are placed on a raised dais, and the ground floor fitted with open seats. Improvements have been made in the chancel recess and also in the mode of egress; the old



lead lights have been replaced with new windows in geometrical designs glazed with tinted glass. The works have been carried out under the direction of Mr. J. Douglass Mathews, of Dowgate Hill, by Messrs. Dove Bros., Islington. The cost, including lighting and warming, will be about 1,500*l.*, but as the funds in hand do not reach this sum, the external work has to be postponed, and several improvements desired have had to be abandoned.

**Highbury.**—A parish-room for Christ Church, Highbury, has recently been built by Mr. Nightingale, of Lambeth, from the designs of Mr. J. Douglass Mathews, of Dowgate Hill. It consists of a hall to seat 300 persons, with large class-room in rear, and scullery, &c. The interior as well as the exterior is faced with yellow bricks and red brick bands. The roof is open-timbered and boarded, with ventilation-chamber in upper portion. The floor is of wood blocks, bedded on concrete. The gas lighting is by pendant brackets from the hammer beams. The total cost will be about 1,400*l.*

**Bedford.**—A north aisle, which has been added to St. Paul's Church, Bedford, has been opened. The contractor for the work was Mr. A. Kimberley, of Banbury, and Mr. John Day, Bedford, is the architect. The stone and wood-carving has been done by Mr. McCulloch, of Kennington Road, S.E.

**Basingstoke.**—The foundation-stone of a new tower to Ellisfield parish church has been laid. The tower will be square, with an ornamental stone parapet, in the Early Decorated style. It will be constructed of flint, with Bath stone dressings, and will be about 50 feet in height. The work is being carried out by Messrs. J. H. and E. Dyer, of Alton, from the designs of Mr. J. S. Paull, of London.

**Coventry.**—The Company of Cappers and Feltmongers, Coventry, have voted 100*l.* towards the restoration fund of St. Michael's Church, Coventry, and the Drapers' Company have already promised 250*l.* It is hoped that aid may be received from some of the City companies; but the Goldsmiths' Company have reluctantly felt obliged to prefer other applications, though there are, it is estimated, 4,000 people engaged in the local watch trade. It is hoped that it may be reported that the fund amounts to 1,900*l.*, when 1,000*l.* will still be required to meet the conditions attendant upon a local donation of 10,000*l.*

**Brixton.**—A new Baptist chapel has been opened in Acre Lane, Brixton. The building is in the Gothic style, and was erected by Messrs. Higgs & Hill, builders, of South Lambeth. The heating is by Messrs. Jones & Son, Bankside, and the terracotta was supplied by Messrs. Stiff.

## GENERAL.

**M. Paul Baudry** has completed a large painting for the Duc d'Aumale. It is to adorn the ceiling of one of the rooms in the château at Chantilly. The subject is *Mercury conveying Psyche to Elysium*.

**An Art Loan Exhibition** is to be held next January at Norwich, in aid of St. Peter Mancroft Church restoration fund.

**The Studio** of Mr. H. V. Inglis, at Rudgwick, Sussex, has been destroyed by fire. Many valuable works of art were destroyed.

**The Majolica** and other works of art bought by a syndicate at the sale of the Fontaine Collection have (with two exceptions) been repurchased by the Trustees of the British Museum and the Science and Art Department.

**The Bristol University College** is to receive 2,000*l.*, the profits derived from the Industrial and Fine Arts Exhibition lately closed, after being open three months.

**The Russian Government** has purchased the Basilewski Collection, which for many years was to be seen in Paris. It contains 750 examples representing the various schools of industrial art from the second to the seventeenth century. The price paid for the collection was six millions of francs.

**An Exhibition** will be opened in Paris on Monday illustrative of *Le Sport dans l'Art*. The profits are to be given to a charitable society. A large number of pictures have been lent, including works by Cuyp, Snyder, Oudry, Wouvermans, Géricault, Carle Vernet, Décamps, and by many living artists. England will be represented by some works by Landseer and Herring.

**Mr. Henry Perkin** (of the firm of Messrs. Perkin & Bulmer, architects, Leeds), was the designer of the mace which was presented on Saturday to the Mayor and Corporation of Harrogate by the ladies of the town. It is in the Jacobean style, of massive proportions, and has been executed in silver gilt.

**A Memorial Window** has been placed in St. Paul's Church, Burton-on-Trent, as a memorial of the late Mr. M. T. Bass. An oak porch has been erected at the west end of the church from the design of Mr. R. Churchill, architect.

**Messrs. Broughton & Co.**, of Queen Victoria Street, have been awarded a medal at the Health Exhibition for their very useful "Chelsea" patent reversible centre-bit mortise lock.

**An Antique Marble Font**, obtained from Italy, has been presented to Chester Cathedral by Lord Egerton of Tatton.

**Mr. T. C. Horsfall**, on Thursday in last week, delivered a lecture entitled, "What to Look for in Pictures," in the large Picture Gallery of the Nicholson Institute, Leek.

**The Ruskin Museum.**—At a meeting of the Sheffield Town Council on Wednesday, Mr. Alderman Hunter reported that it was very doubtful if Sheffield would be selected by Mr. Ruskin as the recipient of his museum. Mr. Ruskin promised, in writing, to place the museum in Sheffield, providing 5,000*l.* were guaranteed. The money had been promised, and everything done to meet Mr. Ruskin's wishes, but now Mr. Ruskin did not seem disposed to have any communications with Sheffield, and the announcement had been made that the museum was going to Bewdley.

**The Tower of St. Helen's Church**, Abingdon, is to be restored and the spire rebuilt, and the work is to be begun in the ensuing spring.

**The Earl of Home** has promised 1,000*l.* to the building fund of the Edinburgh University Buildings.

**Dr. Waldstein** will deliver three lectures at the Royal Institution on "Greek Sculpture from Phidias to the Roman Era," on the three latter Saturdays in January next.

**The Old Shire Hall of Woodbridge** is being restored under the direction of Mr. Eyton, architect, Ipswich.

**Stained Glass.**—A handsome four-light stained glass window, depicting Scriptural scenes, and with tracery-work, has been erected in St. Luke's Church, Endon, by Messrs. Jones & Willis, of Birmingham and London.

**Dr. Crowden**, head-master of Queen Elizabeth's Grammar School at Cranbrook, has offered to give a donation of 1,200*l.* towards the building fund of the school, in addition to the 1,400*l.* which he has already raised by subscriptions, on condition that the central block of buildings designed by the architect be completed. The Governors have accepted his offer, and the remainder of the works will be proceeded with forthwith. The buildings are designed by Mr. T. G. Jackson.

**Home for Female Inebriates.**—The foundation-stone for the extension of these premises, which are situated at Ebenezer Terrace, Kennington, was laid on Wednesday last by Mr. Samuel Morley, M.P. The object sought is, by building a commodious steam laundry, to endeavour to make this institution for the reform of drunkenness self-supporting. The architect is Mr. Banister Fletcher.

**Saltwood Castle, near Hythe**, the ancient palace of the archbishops of Canterbury, has just been restored for residential purposes by the owner, Mr. W. Deedes.

**The Committee** of the Paisley Liberal Club have purchased from the Corporation for 3,300*l.* a piece of ground at the corner of High Street and Churchill, Paisley, as a site for the new club, which is to cost over 10,000*l.*

**A Japanese Inventor**, named Sakashita, of Wasima, is said to have discovered a means of making a paper from marine plants. It is thick in texture, and from its transparency can be substituted for glass in windows, and when coloured becomes an imitation of stained glass.

**The Commission** for the Paris Universal Exhibition of 1889 have decided that the Champs de Mars should be the site of the principal exhibition. Simultaneously a so-called "Labour Exhibition" is to be held at Vincennes.

**Messrs. Chubb & Sons** have obtained the Fothergill gold medal from the Society of Arts, for the best exhibit in Class 27 of the International Health Exhibition. The exhibit consisted of Chubb's patent fire-resisting doors, which have previously obtained the only gold medal awarded by the exhibition jury in the class for fire-prevention apparatus.

**Messrs. Kirk & Randall** have undertaken to complete the building of the new workhouse for the Wandsworth and Clapham Union, of which Mr. Aldwinkle is the architect.

**Five Stained-Glass Windows**, by Messrs. Clayton & Bell, have been placed in the chancel of All Saints Church, Cairo, in memory of the soldiers who fell in the Egyptian campaign of 1882.

**The Belfry Arch** of the Saxon tower of Earl's Barton church now being restored by Mr. J. Harris, contractor, of Earl's Barton, under the direction of Mr. Pearson, R.A., has been completed. In opening windows in the west of the tower, which have been built up for a great number of years, three windows were found, the lower one being 4½ feet deep by 20 inches wide. The other two are "bull's eyes," and measure about 18 inches in diameter. The whole of the stonework in one of the windows is in good order, and they are further proofs of the antiquity of the tower.

**The Directors of the East Southsea Pier** contemplate improving the structure at a cost of over 8,000*l.* It is intended to extend the pier seaward by 90 feet, to construct a landing-stage of wrought-iron for steamers to come alongside at all tides, to lengthen the pavilion by 40 feet, and cover the whole with a glass roof.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, DECEMBER 13, 1884.

### EDITORIAL NOTICES.

*The authors of signed articles and papers read in public must necessarily be held responsible for their contents.*

*No communication can be inserted unless authenticated by the name and address of the writer—not in every case for publication, but as a guarantee of good faith.*

*Correspondents are requested as much as possible to make their communications brief. The space we can devote to Correspondence will not usually permit our inserting lengthy communications.*

### TENDERS, ETC.

*\*\* As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested, that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.*

*Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—“Contract Supplement to THE ARCHITECT.”*

### COMPETITIONS OPEN.

FALMOUTH.—Dec. 24.—Plans are required for the Erection of Wesleyan Sunday School Premises, with Class-rooms, &c. Mr. F. L. Earle, Falmouth.

KING'S NORTON.—Jan. 15.—Plans for the Erection of Four Cottage Homes upon Lands situate at Shenley Fields are required. Mr. Ralph Docker, Clerk of King's Norton Union, Colmore Row, Birmingham.

KING'S NORTON.—Jan. 15.—Plans are invited for the Erection of a Laundry, at the Workhouse, Selly Oak. Mr. Ralph Docker, 57 Colmore Row, Birmingham.

### CONTRACTS OPEN.

ASPATRIA.—Dec. 20.—For Building Oil-house, Granary, Coal-house, Hay-barn, Shop, Slaughter-house, and other Buildings. Mr. Henry Cooper, Co-operative Stores, Aspatria.

BANGOR.—Dec. 17.—For Building Laboratory and Lecture-room. Mr. W. C. Davies, University College, Bangor.

BELFAST.—Dec. 15.—For Building Goods Shed, Donegall Quay. Mr. W. Currie, Harbour Office, Belfast.

BELFAST.—Dec. 18.—For Heating Post Office. Mr. W. B. Soady, Secretary, Office of Public Works, Dublin.

BILLESDON.—Jan. 2.—For Building Additional Vagrant Wards at the Workhouse. Mr. Bird, Surveyor, 16 Hum-berstone Road, Leicester.

BIRKENHEAD.—Dec. 15.—For Building Ward at Fever Hospital. Mr. T. C. Thorburn, Borough Surveyor, 35 Hamilton Square, Birkenhead.

BRADFORD MOOR.—Dec. 20.—For Building Four Houses. Mr. William Ryecroft, Architect, 12 Bank Buildings, Man-chester Road, Bradford.

CHATHAM.—Dec. 24.—For Construction of Iron Pier on Site of existing Sun Pier on the Medway. Messrs. Law & Chatterton; C.E., 46 Queen's Anne's Gate, Westminster.

CROSS HILLS.—Dec. 22.—For Building Six Houses at Sutton Mill, and Construction of Sewer. Mr. S. Jackson, Architect, 33 Kirkgate, Bradford.

CUCKFIELD.—Dec. 23.—For Additions to National School Buildings. Mr. F. W. Holloway, Architect, Hayward's Heath.

CUPAR, FIFE.—Dec. 15.—For Water Supply Works to Craigrothie House and Offices, Parish of Ceres. Mr. David Storrar, C.E., Cupar, Fife.

DARLSTON.—Dec. 18.—For Construction of Ten Miles or thereabouts of 18-inch, 15-inch, 12-inch, 10-inch, and 9-inch Earthenware and Cast-iron Pipe Sewers, and Con-struction of Engine and Boiler-house, Cottage, Tanks, Filter-beds, Drains, &c. Mr. Edward Pritchard, C.E., 2 Storey's Gate, Westminster, or 37 Waterloo Street, Birmingham.

DARLINGTON.—Dec. 18.—For Building Hind's Cottage. Messrs. Clark & Moscrop, Architects, Feethams, Darling-ton.

DONCASTER.—Dec. 22.—For Building Church or Church school at the Holmes. The Secretary, Holmes Church Committee, Mansion House, Darlington.

DURBAN.—Dec. 15.—For Supply of Cast-iron Water Pipes (1,000 tons), &c. South African Mercantile Agency, 9 King William Street, E.C.

DYONISIDE.—Dec. 26.—For Building Board Schools, Mr. W. Yates, Clerk to the School Board, Distington.

HALIFAX.—Dec. 15.—For Improvements at Free School Lane, Brick Sewer, Fencing, Walling, &c. Mr. Escott, Borough Engineer, Town Hall, Halifax.

HERTFORD.—Dec. 19.—For Alterations to Assize Courts Shire Hall. Mr. Urban A. Smith, County Surveyor, Hert-ford.

HOLLINWOOD.—Dec. 23.—For Building Retort-house, Shed, and Chimney. Mr. H. Andrew, Gas and Water Offices, Oldham.

HUDDESFIELD.—Dec. 18.—For Enlargement of Pas-senger Station. The Engineer, Euston Station, London.

KENDAL.—Dec. 30.—For Building Tower, Crosthwaite Church. Mr. J. Bintley, Architect, 7 Lowther Street, Kendal.

KING'S NORTON.—Dec. 16.—For Laying Sewers, King's Heath and Greenhill. Mr. Robert Godfrey, Surveyor, King's Heath.

LEEDS.—Dec. 13.—For Taking Down and Rebuilding Chapel. Mr. J. Howdill, Architect, 4 Park Lane, Leeds.

LEEDS.—Dec. 16.—For Building Warehouse. Mr. Wm. Bakewell, Architect, 38 Park Square, Leeds.

LEEDS.—Dec. 19.—For the Finishing Contracts, Boar Lane Restaurant. Mr. C. S. Nelson, Architect, Albert Chambers, Park Row, Leeds.

LONDON.—Dec. 15.—For Fittings for Central Technical Institution. Mr. Alfred Waterhouse, A.R.A., 20 New Cavendish Street, W.

MIDLAND RAILWAY.—Dec. 22.—For Building Boiler-house and Chimney Shaft, Derby. Mr. A. Langley, Engi-neer, Midland Railway, Derby.

NEWARK.—Dec. 17.—For Building Shop and Premises, Market Place. Mr. George Sheppard, Architect, 9 Kirk-gate, Newark.

NEWCASTLE-ON-TYNE.—Dec. 15.—For Constructing and Fitting-up Public Baths and Washhouses. Messrs. Gibson & Allan, Architects, 3 St. Nicholas' Buildings, Newcastle-on-Tyne.

NEWLYN.—Dec. 13.—For Construction of Concrete Pier. Mr. J. C. Inglis, Engineer, 13 Buckland Terrace Plymouth.

NORHAM.—Dec. 15.—For the Supply and Erection of a Wrought-iron Bridge over the River Tweed. Mr. H. F. Sneyd-Kynnersley, Surveyor's Office, Moot Hall, New-castle-on-Tyne.

NORTHALLERTON.—Dec. 17.—For Building Station-master's House at Danby Wiske. Mr. William Bell, Archi-tect, York.

NORTH SHIELDS.—Dec. 20.—For Building Keeper's Lodge and Stable for Cricket Club. Mr. H. Gibson, Architect, 101 Howard Street, North Shields.

OPORTO.—Dec. 15.—For Construction of Covered Market. Senor J. A. Correa de Barros, President of the Municipal Board of Oporto, Portugal.

PEEL.—Dec. 23.—For Taking Down Wooden Drill Shed, Battery, Magazine, and Latrines at Barrow-in-Furness, Removing and Re-erecting at Peel. Director of Works Department, Admiralty, 71 Spring Gardens.

PORTSMOUTH.—Dec. 13.—For Building Inland Revenue Office. H.M. Office of Works, 12 Whitehall Place, S.W.

RAMSBOTTOM.—For Building Pair of Semi-detached Villas, near Irwell Mount. Messrs. Sellers & Hamilton Architects, Union Chambers, Bury.

RASTRICK.—Dec. 17.—For Additions to Common School, Warming, &c. Mr. R. F. Rogerson, Architect, 11 Church Street, Brighouse.

SHIELDS.—Dec. 15.—For Erection of Station Buildings, Waiting-rooms, Booking-hall, &c. Drawings at the Engineer's Office, St. Enoch Station, Glasgow.

SMALLBURGH.—Dec. 15.—For Repairs and Drainage Works at the Workhouse. Mr. J. B. Pearce, Architect, Surrey Street, Norwich.

PRIMROSE & CO. CHURCH ST. SHEFFIELD. ECLIPSE PATENT ROOF GLAZING NO PUTTY, PAINT, ZINC OR OTHER PERISHABLE MATERIAL. IN EXTENSIVE USE FOR RAILWAY STATIONS, MILLS, &c. NO OTHER GLAZING CAN BE WARRANTED INDESTRUCTIBLE. PRIZE MEDAL AWARDS: KENSINGTON, MANCHESTER, LIVERPOOL, DONCASTER 1882.3. THE ONLY GLAZING AWARD, INTERNATIONAL HEALTH EXHIBITION, 1884.



**SOUTHAMPTON.**—Dec. 15.—For Building Infant School, &c., and Additions to York Buildings Board School. Mr. E. T. Howell, Architect, 6 Portland Street, Southampton.

**STOUGHTON.**—Dec. 30.—For Building Board School. Mr. S. Welman, Architect, High Street, Guildford.

**SWANSEA.**—Dec. 31.—For Construction of Stoneware Pipe Sewers (3,000 yards) and Cast-iron Pipes (750 yards) for Sewerage of Port Tennant. Mr. R. H. Wyrill, Borough Engineer, Guildhall, Swansea.

**TAFF FAWR VALLEY.**—Dec. 18.—For Sinking Trial Shafts. Mr. J. A. B. Williams, C.E., Queen's Chambers, Queen Street, Cardiff.

**TOTTENHAM.**—Dec. 23.—For Construction of Brick Sewer, &c. Mr. de Pape, Engineer, Local Board Offices, High Street, Tottenham.

**TYNEMOUTH.**—For Building Lecture Hall and Schools. Messrs. Oliver & Leeson, Architects, Bank Chambers, Mosley Street, Newcastle-on-Tyne.

**WOODHOUSE.**—Dec. 13.—For Erection of Mista, Stabling and other Buildings. Mr. F. W. Rhodes, Architect, Upper Wortley.

**YORK.**—Dec. 22.—For the Construction of Flood Banks, Subsidising Reservoir, Filter Beds, &c., at Pumping Station, near Acomb Landing. Mr. C. Hornsey, Engineer, 16 Railway Street, York.

## TENDERS.

### BEESTON.

For Street Improvement Works, Beeston. Mr. G. W. Hawley, Surveyor.		
Shortland & Co., Nottingham	£3,343	0 0
Messon, Nottingham	3,015	0 0
Slinger, Cleckheaton	3,001	0 0
R. C. Cordon, Nottingham	2,931	0 0
Foster & Barry, Radcliffe-on-Trent	2,766	0 0
Underwood, Wellingboro'	2,692	0 0
Greenwood, Mansfield	2,557	0 0
Bradley, Lincoln	2,494	0 0
Hopkin, Nottingham	2,252	0 0
Musson & Co., Leicester	2,229	0 0
Smart, Nottingham	2,137	0 0
Todd, Derby	2,011	0 0
W. Cordon, sen., Burton Joyce	1,813	0 0
Knight, Loughborough	1,795	0 0
HAWLEY, Ilkeston (accepted)	1,755	0 0

### BOSTON.

For Construction of Sewer, West Street Road, Boston, Lincolnshire.		
LUCAS (accepted)	£188	0 0
Surveyor's estimate	175	0 0

### BRIDGWATER.

For Conversion of Old Court House into Municipal Offices and Free Library. Mr. G. B. LAFFAN, Borough Surveyor, Bridgwater.		
Harris & Tapscott	£215	0 0
Sendell	194	0 0
Escott	185	9 0
Searle	163	0 0
Kitch	160	0 0
Palmer	149	0 0
POLLARD (accepted)	125	0 0

For Altering the Outfall of the Eastover Main Sewer Bridgwater. Mr. G. B. LAFFAN, Borough Surveyor.		
Escott	£99	0 0
POLLARD (accepted)	67	0 0

### BROADWATER.

For Draining Cemetery, and Works in Connection, Broadwater, Worthing.		
Staneridge, Broadwater	£1,262	2 9
Rhodes, Upper Holloway	1,221	0 0
Marnor, Broadwater	1,199	0 0
W. Churcher, Worthing	1,020	10 11
Duffield, West Tarring	900	12 6
Lawes, Worthing	875	1 7
Cook, Worthing	869	15 0
J. Churcher, Worthing	832	14 8
Blaker, Worthing	818	0 0
Hall, Portsmouth	803	7 8
Dearle, Eastbourne	769	1 0

### BURSLEM.

For Works in Brook Street, Burslem.		
MACKAY (accepted)	£182	7 2

### CAVERSHAM.

For the Erection of Residence, Hemdean Hill, Caversham, Oxon, for Mr. C. R. Havell. Messrs. Brown & ALBURY, Architects.		
WERNHAM (accepted)	£1,400	0 0

For new Billiard-room at Balmore, Caversham, Oxon, for General Radcliffe. Messrs. Brown & ALBURY, Architects.		
WERNHAM (accepted)	£750	0 0

### CHATHAM.

Messrs. Taylor & Neate, whose Tender (see list in Contract Supplement of *The Architect*, November 29), was accepted for the Construction of the new Pier at Chatham, have refused to sign the contract, having discovered, it is said, an error in the Specifications, which would have had the effect of making them considerably out of pocket. Fresh Tenders are advertised for by the Chatham Local Board of Health.

### COLLINGWOOD.

For Alterations to Surrey House, Collingwood, Surrey, for Mr. H. G. Poulter. Messrs. Brown & ALBURY, Architects.		
Latter, Camberley	£700	0 0

### CROWBOROUGH.

For Drawing-room to High Broom House, Crowborough, Sussex, for Miss Wolfe. Mr. E. P. Loftus Brock, F.S.A., Architect.		
Snewin	£1,475	0 0
Norman	1,450	0 0
Nightingale Bros.	1,428	0 0
Charlwood Bros.	1,265	0 0
Morris	1,200	0 0
Godly	960	0 0

### FINCHLEY.

For House and Shop to be Erected at North Finchley, for Mr. Rich. Mr. F. D. Thomson, Architect, Woodside, North Finchley.		
Sheppard	£744	0 0
Russell	700	0 0
Dixon	590	0 0
Thrum	450	0 0
Clark & Wright	440	0 0

### FRODSHAM.

For Restoration of Tower of Parish Church, Frodsham. Messrs. LINAKER & DAVIES, Architects.		
Aukland, Warrington	£2,500	0 0
Stelfox & Carter, Northwich	2,494	0 0
Beckett, Hartford	2,117	10 0
Johnson & Son, Kelsall	2,022	12 8
DAVIES, Frodsham (accepted)	2,000	0 0

### FROME.

For Construction of Outfall Sewers (4,500 yards), Frome. Mr. PHILIP EDINGER, Engineer.		
Osborne	£9,382	0 0
Long	8,667	0 0
Saunders	7,870	0 0
Small & Sons	7,674	0 0
Ambrose & Son	7,571	0 0
Mackny	7,182	0 0
Gunn	7,104	0 0
Hill Bros. & Co.	7,066	0 0
Oliver	6,900	0 0
Whettam	6,806	0 0
Bottom Bros.	6,626	0 0
Cooke & Co.	6,602	0 0
Hall	6,128	0 0
Evans Bros.	5,778	0 0
PICKTHALL & SONS (accepted)	5,677	0 0

### HEBBURN.

For Improvement Works, Waggon Way Road, Hebburn. Mr. F. WEST, Surveyor.		
Callaghan, Jarrow	£1,225	17 10
Scott, Jarrow	1,199	11 8
Maughan, Jarrow	1,122	11 0
W. & M. Young, Gateshead	1,083	0 0

### JARROW.

For Improvement Works, Bede Burn Road and Kent Street. Mr. J. PARRIE, Borough Surveyor, Jarrow.		
Callaghan, Jarrow	£355	0 0
Maughan, Jarrow	310	17 11
ADAMS, Jarrow (accepted)	293	6 10

### KEIGHLEY.

For Works in Parson Street, Keighley. Mr. W. H. HOPKINSON, Borough Engineer.		
Harris, Shrewsbury	£420	6 9
Kitchen, Bradford	412	18 6
Dewhurst, Halifax	369	11 6
Hudson, Halifax	347	19 1
Smith, Keighley	351	1 0
Tempest, Keighley	336	17 0
Rhodes Brothers, Shipley	333	5 0
Belfield & Barnes, Halifax	321	4 8
BARRETT, Harden (accepted)	321	3 1
Engineer's estimate	333	2 0

### LONDON.

For a 10-ton Steam Roller, for the Camberwell Vestry.		
Gledhill	£380	0 0
AVELING & PORTER (accepted)	380	0 0
Green & Co.	375	0 0
Fowler & Hunt	370	0 0

For Supply of Fire Appliances, and Works in connection, St. Pancras Infirmary, Dartmouth Park Hill, N.		
Gritten & Co.	£225	0 0
Knight	207	7 0
Merryweather & Sons	205	0 0
Shand, Mason & Co.	193	0 0
J. & F. May	185	0 0

For Alterations at the Salmon and Compasses, Dorrington Street, Leather Lane. Messrs. RAYMENT & WEBB, Architects. Quantities by Messrs. Batstone Bros.		
Birt	£1,100	0 0
F. & F. J. Wood	1,035	0 0
Oldrey	980	0 0
Burch & Co.	963	0 0
Jackson & Todd	930	0 0
Dixon & Jones	895	0 0
Walker	849	0 0

For Alterations to the King's Head, 128 Commercial Road, E, for Messrs. Gerlach & Cox. Mr. R. A. LEWCOCK, Architect, 88 Bishopsgate Street Within.		
Toms	£987	0 0
Marr	950	0 0
Jackson & Todd	949	0 0
Shurmer	923	0 0
Oldis Bros.	890	0 0

### LONDON—continued.

For Works in the Formation of a Circus at Covent Garden Theatre. Mr. FRANK MATCHAM, Architect, Rugby Chambers, Bedford Row, W.C.		
Patman & Fotheringham	£1,973	0 0
Roach	1,320	0 0
Shoolbred & Co.	1,249	0 0

For Alteration of Sewer in Queen's Square and Construction of New Sewers in Baldwin's Gardens and Charterhouse Square. Mr. L. H. ISAACS, Surveyor.		
Turner	£1,935	0 0
Schofield	1,780	0 0
Bottom Bros.	1,580	0 0
Mowlem & Co.	1,550	0 0
Killingback	1,485	0 0
Taylor	1,390	0 0

For Paving Works, St. George's East.		
Ratty	553	0 0
Mowlem & Co.	525	0 0
WHEELER & HINDLE (accepted)	519	0 0

For Enlargement of Board School, Globe Terrace, Hackney. Mr. E. R. ROBSON, Architect.		
Kearley	£3,414	0 0
Goodman	3,375	0 0
Perry & Co.	3,268	0 0
Brass	3,230	0 0
Wall Bros.	3,160	0 0
Kirk & Randall	2,947	0 0
Jerrard	2,899	0 0
Pritchard	2,898	0 0
Smith & Son	2,897	0 0
Holloway	2,888	0 0
Shurmer	2,866	0 0
Howell & Son	2,838	0 0
Bangs & Co.	2,820	0 0
Stimpson & Co.	2,795	0 0
Grover	2,776	0 0
Oldrey	2,768	0 0
W. & F. Croaker	2,730	0 0
Cox	2,714	0 0
Jackson & Todd	2,695	0 0
Johnson	2,684	0 0
Atherton & Latta	2,532	0 0
Wall	2,510	0 0

For Re-erecting Iron Buildings for School Board, Biscay Road.		
Stimpson	£270	0 0
Oldrey	265	0 0
Johnson	186	0 0
For Covered Playground, Gloucester Grove.		
Stimpson & Co.	£121	0 0
Holden & Co.	100	0 0

For Repairs to Schools.		
Hobson	£134	0 0
Hornett	101	13 0
Williams & Son	53	0 0
Dearing & Son	51	10 0
Knight & Waldron	49	10 0
McCormick & Sons	46	0 0

For Heating and Ventilating the New Chapel, Bognor, Sussex, for the Merchant Taylors' Company. J. L. BACON & Co., London (accepted).		
Coombe	25	0 0
Robey	19	10 0
Howard	13	1 0

For Heating the Institute of Art, Science, and Literature, York. J. L. BACON & Co., London (accepted).		
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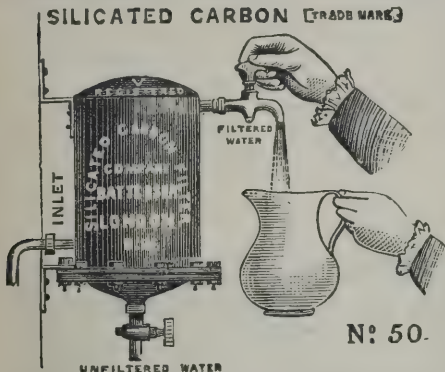
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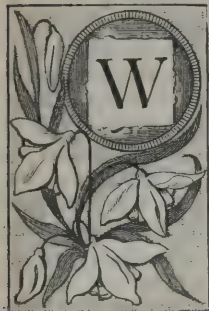
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# The Architect.

## GOTTFRIED SEMPER AND HIS THEORY OF ART.



WE have the authority of BACON for the belief that distilled books are "flashy things." Nevertheless it is an advantage to be able to comprehend the spirit of an author, and, if the writings are voluminous, that is not possible for the majority of people who lead busy lives unless they are aided by abstracts. The summary of Mr. RUSKIN's writings which was read at the Institute of Architects a few years back was found to be most useful; and the paper on SEMPER by Mr. LAWRENCE HARVEY, of which a part was

heard at the meeting on Monday, cannot fail to secure equal attention. As everybody knows, Mr. RUSKIN is a writer who can give attractiveness to political economy or mineralogy. SEMPER, on the contrary, was indifferent to literary style. He said plainly that he did not covet idle readers, and his books are in such a form as to need no small courage in a reader who undertakes the thorough study of one of them. There is no translation in French or English of SEMPER's principal work—on style in art. An essay of his is occasionally found in a French periodical, such as the *Revue des Cours Littéraires*, but we may seek in vain for a reference to him in an English review or magazine. The public can only judge of his opinions from the extract which was printed in one of the handbooks to the Crystal Palace.

It is not, however, an advantage that his writings should so soon fall into oblivion in England. SEMPER was one of those men who are able to excite thought, and therefore his books are more valuable than others which may contain later information. Even his errors have their use. The one volume on Style, which is all that has been printed in Germany, is employed in the fine art classes of the Edinburgh University (where alone in Great Britain a systematic course of instruction in the history of art is to be obtained), and in the hands of a capable professor there is no more suitable book. Let us hope that the Science and Art Department by obtaining a condensed translation of it will enable art students to understand SEMPER's theories. In doing so the reputation of one of the earliest officers will be extended.

SEMPER was among the refugees who fled to England in consequence of the revolutions of 1848. By martial law he was guilty of treason, for, while an official architect in Dresden, he gave directions to insurgents about the construction of a barricade. But he was not a conspirator. If he had been he was not likely to secure the protection of Prince ALBERT. Indeed he owed his escape from Dresden to the exertions of the English ambassador. When the central school for general and special instruction in art was established at Marlborough House in 1853, SEMPER was appointed to be one of the teachers. He had charge of "Practical Construction, including Architecture, Building, and the various Processes of Plastic Decoration, Furniture, and Metal Working," a division that was sufficiently extensive for one man's supervision.

SEMPER's position was not enviable. The technical courses were no more than an experiment. They were "intended to impart systematically a knowledge of the scientific principles of art, especially in its relation to the useful purposes of life," but it was by no means decided what those principles were. Mr. REDGRAVE, the art superintendent, had his own theory about them; so had Mr. WORNUM, the librarian; Mr. OCTAVIUS HODSON, the lecturer on surface decoration; Mr. J. C. ROBINSON and Mr. SIMPSON, who taught pottery painting; and Mr. OWEN JONES, who occasionally gave lectures. Mr. HENRY COLE, who was one of the secretaries, had likewise his notions about art and life. Among all those improvised authorities SEMPER alone was recognised as Professor; but his influence was circumscribed. He was a *protégé* of the PRINCE, and accordingly was regarded with suspicion by some; to others he was the dangerous Continental revolutionist. SEMPER had a high opinion of himself, and was accustomed to more despotic powers than were admitted in Marlborough House. The grants in those days were niggardly, and he could not under-

stand the difficulties of obtaining examples for his class. His students were not selected for ability, yet it was with their aid he was expected to produce a WELLINGTON Funeral Car, and it was for their crude plaques that he had to design a setting in the form of a cabinet or other piece of furniture. Little was cared for theory in an institution of which the School of Mines was a branch, and poor SEMPER revelled in speculations. He expressed himself in English with difficulty, and we fear that when he did so he was considered a bore. Any man who believed that the "blessed word Mesopotamia" expressed the name of the paradise from whence all art was derived, and who asserted that SENECA was the safest guide in the conduct of life was never likely to become respected as a practical man in England. SEMPER had gained long before a reputation as one of the first architects in Germany; but what English official would consult him on any matter relating to architecture when Captain FRANCIS FOWKE, R.E., was about the premises? It is not surprising that SEMPER seized the first opportunity to return to the Continent. We may assume that his departure did not excite much grief among his colleagues.

It has been claimed for SEMPER by Mr. HARVEY, that he was the first among the moderns to enounce the theory of evolution, having been inspired by his philosophical master SENECA. That position might be disputed; but SEMPER has been at least the first among modern artists who has expressed the theory in words. It is hardly necessary to say that every man who had studied the history of painting, sculpture, or architecture must have gained an idea on the subject which would correspond more or less closely with the theory.

SEMPER maintained that the origin of the fine arts is to be found among technical arts of a humble kind, and in reducing them to a simpler state he did not restrict himself by the present use of materials. Thus, for example, he considers that primitive carpentry was the originator of forms which may now be produced in stone; that, inasmuch as tile pavements may have been suggested by carpets or matting, there is a relation between textile and ceramic art, and so of other arts. Since textiles are the oldest production of technical art, it may be concluded, he says, that modern arts are directly or indirectly derived from weaving, sewing, and embroidering. Gothic art, according to SEMPER, put the bones outside the skin; but, speaking generally, all other forms of art are recognitions of the principle of covering one material with another that is more agreeable to the eyes, or, as we express it, that the clothes philosophy prevails in art as well as in morals.

It has been suggested that CARLYLE's first book, "Sartor Resartus," is a skit on this system, and that TEUFELSDROCKH, who lectured on things in general in Heaven knows where, was a portrait of the architect-professor. But there is no evidence to support this belief. SEMPER's essay does not appear to have excited much interest in Germany on its appearance, and it is most unlikely that a copy could reach CARLYLE in Craigenputtock. Besides, it is well known that inspiration for the "Sartor" and other writings was drawn by CARLYLE from the doctrine of FICHTE, which dates from the end of the last century. According to it, all things which we see or work with are no more than a kind of vesture. May we not suppose that SEMPER, like CARLYLE, was indebted to the German transcendentalist? But a much older source was open to the scholarly SEMPER, who was at home in the classics. What is the meaning of the despised Aristotelian category which is translated as "habit" but a suggestion of a difference between outside and inside, between a thing and its external wrappings? The Greek dialectician must have observed that in many things which were the product of man's hands there was an inner core and an external covering. In the case of statuary there was drapery or thin plates of metal. From this appearance his thoughts were carried to life in general, and he drew the conclusion that one thing can be contiguous to another without being united in vital continuity. SHAKESPEARE, while in a cynical mood, came to the same conclusion. He tells us that—

The painting is almost the natural man;  
For since dishonour traffics with man's nature,  
He is but outside.

The clothes philosophy is therefore of older date than SEMPER, and, indeed, no man could apply a plate of metal, a slab of marble, or a coat of paint to materials of a different kind without having a conviction of such a principle.

If we accept SEMPER's theory, it will follow from it that



conventional art has had precedence of imitative art. The crossing of threads, stitches, seams, and so on are supposed to be suggestive of repetition, rhythm, and other elements of ornament. But how does the historical evidence support this view? SEMPER lays much stress on what is found in Assyria and Egypt. It is, however, true that since he wrote, ornament has been discovered of an age that makes the oldest Assyrian or Egyptian work seem to be modern productions. The sketches of reindeer which have been found scratched on bones by the wild cave-dwellers are sufficient to show that man was an imitative artist before he took to conventionalising needlework. Collections of prehistoric art suggest the same conclusion. If we must start from the source of art it is as well to be correct, and go back sufficiently far. In SEMPER's time there was little known about anthropology as a science, and it was premature to build up theories on the origin of art. Judging by the revelations which are constantly being made, it may be said that we are not in a position to write the history of England during the last three centuries, and in all countries the works of historians have to be superseded. It is still more difficult to philosophise on the art-history of the human race.

Unless we are mistaken, GOTTFRIED SEMPER was one of the last men who should have undertaken the history of art. Thinkers may be divided into two classes. The first class uphold necessity, and maintain that truth must be single. Hence they advocate the adoption of rigid rules in art and literature. The second class believe in liberty and individualism, and allow as many kinds of art and literature as there are artists and writers. SEMPER belonged to the former, and was a rather intolerant representative of it. He would have everything assume a certain definite form, or, in other words, he would apply the laws of crystallography to painting, sculpture, architecture, and ornament. He read the history of art by the aid of logic, and interpreted forms as if they were inevitable products of a mental action that was mechanical in its working. If the Egyptian priests covered the walls of a temple with squares in order to block out their conventional figures, it was because some primitive women had used coarse canvas for embroidery. If a painter adopted the rules of composition, and kept his figures from straggling, he was indebted to the use of scarves some thousands of years before. If a writer like DE QUINCEY takes care to unite his sentences, so that the second relates to the first and the third to the second, it is owing to the fact that an unknown savage strung beads on a string. SEMPER's theory, if followed out, leads to conclusions like the foregoing.

It is, we admit, a fascinating task to seek after the process employed by a great artist or a great writer; and, as HAMLET says, "to pluck out the heart of the mystery" which inspires genius. Even alchemy cannot be more exciting. But, although perseverance is rewarded by occasional discoveries, complete success is unattainable. No man has done more than SEMPER in that line. He believed that he had found what might be called the Philosopher's Stone of Art, but if so, why was he unable to employ it? His buildings are, we suppose, theoretically faultless, if judged by the laws which he had evolved, but with all respect for the designer it must be said that the majority are not pleasing examples of architecture. The proportions are determined by rule, the details are correct, everything is in its proper place; but there is nothing which suggests an inspiration, and nothing which is attractive. They are precisely the kind of buildings which might be cast or turned out of a machine. They are examples of a rigorous logic and a faultless geometry, and are correspondingly chilling.

SEMPER had a surprising power of finding resemblances between things, and on that account his writings are useful to students. They enable one to observe. But a recognition of differences is also necessary if we wish to gain a complete knowledge of forms or processes, and in that respect SEMPER was rather defective. Let us, however, be grateful for what he has done. SEMPER is one of the very few artists who have attempted to form a theory of art, and it is not impossible that if occasionally he is too definite in his conclusions, it is because he rebelled against the nebulous speculations concerning art which came from his visionary countrymen. An earnest student can make good use of SEMPER's writings, whether he will consider them to be infallible is another question. Meanwhile the thanks of the members of the Institute are due to Mr. HARVEY for the great labour he has gone through in compressing SEMPER's big volume within the limits of an ordinary paper.

## THE ART OF MR. J. D. LINTON.

THE test of a general exhibition-room has been held to put an artist on his just level, very much as the ordeal of a public school is supposed to try the power of a lad to "hold his own." And in a certain sense this accepted notion is correct: there are qualities of artistic attainment, such as mastery of technical means, character in style, force, which are gauged by juxtaposition with the various work of other men. But, on the other hand, the finer, more delicate attributes of a true artist may be overpowered by discordant surroundings, and the most blatant performances of mediocrity serve to hinder the appeal of a TURNER or a MULREADY. Painting up to exhibition pitch, as it is called, becomes an absolute snare, and many an artist arrests the development of his best perceptions and individual capacities by a determination to be at all events seen and noted in spite of the hubbub. Exaggerated mannerisms, coarse colour, cheap effect—these are the unwholesome results of "exhibition pitch" with men not sufficiently possessed by an ideal standard to resist the temptation to attain popular remark at any price.

Possibly it is the reaction against all this among thoughtful people, painters and amateurs, that has swayed the fashion of exhibition organising in the direction of special collections. Certainly the number of these exhibitions, illustrating the work of one or of two men, has greatly increased of late. Within the winter programmes of the Royal Academy the plan has resulted admirably in the honourable recognition of British painters who died within the century. Now our living contemporaries come forward to claim the same chance of appreciation, and the Fine Art Society has assumed the lead in arranging special gatherings within its Bond Street galleries. By the time an artist reaches middle life he has thrown off a great deal of good work that the public has had time to forget, and to assemble together the principal results of his art career is to make out the strongest case for his claim on present and future fame.

The last painter thus prominently placed before us is Mr. J. D. LINTON, by whom some fifty to sixty oil pictures and water-colour drawings have been collected in the larger rooms of the Fine Art Society, and catalogued and commented upon in an appreciative and discriminating way by Mr. WALTER ARMSTRONG. This show of pictures, by an artist of so much distinctive and attractive power as Mr. LINTON, serves to illustrate very well the advantage and disadvantage of these special exhibitions as against the rough competition of the open galleries. When placed among a motley crowd the pictures of this artist tell by contrast of their dignified romantic vein, their emphatic, if unimpassioned narrative, their nobility of colour and sumptuousness of beautiful detail; still more by a certain breadth of manner, often combined with a deliberate finesse of execution. On the other hand, grouped together without foil or opposition, a certain monotony of pleasure in superb costume, a certain repetition of chosen models, a certain immobility of dramatic presentation, as of scenes personated in *tableaux vivants*, are apparent. We see that the single figures, studied under the characters of WALTER SCOTT'S *Earl of Leicester*, *Darnley*, *Peveril of the Peak*, *Alice Bridgenorth*, and what else, are indeed to some extent specific personages, but are much more sufficiently typical models upon whom to cast, in a way wholly suitable to them, splendidly worked-out costume coloured upon a definite scheme. *Leicester* presents a singularly cunning study of white taffety; *Janet Foster* is worked out in dusky sapphire greens; *Darnley* is an apt case for a harmony of black and gold; and *Peveril* pranks it in one of the noblest crimson-red doublets that ever gallant wore. Costume is not a frivolous excuse for handicraft with Mr. LINTON, but a serious matter worthy closest care and elaboration. He does not exactly hold that the clothes make the man, but he forces us to feel that clothes are so characteristic of race, manners, and epoch that in them history is writ plain.

On the whole, this exhibition serves to pronounce the fact that Mr. LINTON is primarily a worker in the water-colour medium. His happiest compositions—*The Admonition*, *Love the Conqueror*, *Ave Maria*, *Maundy Thursday*, *Off Guard*—are in water-colour, and in these and in *The Cardinal Minister*, and in single figure studies in the same vehicle, is to be found also his best work as a colourist. The five large oil pictures illustrating the career of a soldier of fortune in the sixteenth century, designed to adorn the smoking-room of a private



mansion, all of which have been exhibited at the Academy and Grosvenor Galleries, and received criticism in these columns, though so cleverly cast between the decorative and the actual, though abounding in passages of harmonious colour and rich detail, though not wanting in a narrative of sufficient dignity and interest, yet do undoubtedly, and in spite of more ambitious scale and more overt appeal, sink beside the indubitably greater art of the water-colour work. This would not have been the impression left on our minds had we only seen these oil efforts in Burlington House and the Grosvenor Gallery; and it is an advantage of this special exhibition that it tries the artist's most ostentatious endeavours by the standard he himself has raised.

On the whole we recognise this art of Mr. LINTON as of the most soundly original among us. Based, as Mr. ARMSTRONG very well observes, upon study of both Venetian and Netherlandish schools, it shows a picturesque individuality in the combination that indicates the painter is no copyist. He may fail of the opulent life of Venetian art, he has not attained the precision or the *chiaro-oscuro* of the Northern masters of technique. But we may be proud of him as a virtuoso in the modern medium of aquarel, who has worked out in it some of the noblest problems of colour, and enriched the narrative art of the day with inventions of historic dignity created in a vein of genuine and manly sentiment.

### MACHINERY AT THE SMITHFIELD CLUB CATTLE SHOW.

THE annual recurrence of the Cattle Show at the Agricultural Hall, Islington, brings together a collection of machinery such as is seldom seen in London except on those occasions. True, by far the larger portion are implements and machines for agricultural purposes; but the traction and portable engines, of which there are generally numerous examples, are nowadays in as much demand by the contractor and builder as by the agriculturist. Many of the large firms who have won so much honour as makers of agricultural machinery supplement their output by the manufacture of mortar-mills, saw-benches, and similar appliances, by which they appeal to the building trades. Although exhibitions of all kinds are generally considered very "elastic," there are none much more so than the Smithfield Club show. In tracing the gradations between the different exhibits it is comparatively easy to show a connection between this or that, and so effect a kind of connecting "sliding scale" with all; but if we select the lowest in the scale and compare it with the highest the difference is immense, and since last year it has been even more marked. The desire to obtain space in the Islington Hall on the occasion of this annual exhibition has been so great that refusals to applicants have been imperative, and to meet this growing demand the company, about two years since, erected a range of galleries over the entrance or vestibule, which at the last two shows have also been filled with a plethora of miscellaneous productions; and such is the craving for publicity on the part of many firms at the Cattle Show, that it is probable that more room will be needed. At this year's exhibition, that closed on Friday night, last week, the display was of the usual character, and we have selected those exhibits for remark that appear to us most likely to interest our readers.

The ST. PANCRAS IRONWORKS COMPANY were, as usual, well represented. The stable and cowhouse fittings made by this firm are so admittedly good that detailed description is rendered unnecessary. An improved feature was exhibited in cowhouse fittings with a vertical fodder-rack, as originally made for the Duke of Bedford's farm at Woburn. Another noticeable fitting was one designed for heavy draught horses, of massive character, and containing the most recent improvements.

To ordinary appearance there is so much in common with most traction and portable engines, that it seems invidious to make distinctions in many cases; still, there are certain firms who have gained a reputation for these machines that places them in the front rank as manufacturers of them, and in this category we may mention Messrs. ROBESY & CO., of the Globe Works, Lincoln, who exhibited an improved seven horse-power traction engine, with a steel boiler and complete gearing of the same metal, winding-drum, steel-wire rope, &c. Another good engine shown by this firm is a six horse-power portable, with a steam-jacketed cylinder, expansion gear, and feed-water heater, arranged to provide great economy in the consumption of fuel. A ten horse-power "Robesby" semi-portable engine, with locomotive boiler, was an excellent specimen of workmanship, and was fitted with all the firm's latest improvements, tending to economy in fuel, safety in use, &c. In addition to the above-noted were several vertical engines and boilers, admirably adapted for the builder's use, and of their horizontal fixed engines, all of which exhibited good finish and workmanship.

Messrs. MARSHALL, SONS & CO., Limited, of Gainsborough, were also well to the front in engines, in the manufacture of which they are probably not excelled, at least of the types of which we are treating. The principal feature in their exhibit in this department was a newly-designed compound portable engine of 16 horse (nominal) power. It was of massive construction, exhibiting considerable strength in all its parts, and will work at a pressure of 140 lbs. to the square inch. High and low-pressure cylinders are of one casting, and with a base allowing of an extended bearing surface on the boiler, which insures great rigidity in working, patent automatic expansion valve gear being fitted to the high-pressure cylinder. The boiler is like some others in the show, of steel, this metal being now very favourably looked upon by makers for the purpose. It is butt-jointed in the longitudinal seams, and we are informed has been tested by hydraulic pressure to 240 lbs. to the square inch. The other necessary parts are all of the most approved construction, and, taken in its entirety, this engine and boiler may be said to be unique and to possess considerable merit. An eight-horse horizontal engine, Class B in the firm's list, on a cast-iron base, was a compact, good-looking piece of machinery; and a six-horse traction engine was noteworthy for several improvements introduced into it. There was also another compound engine of eight-horse (nominal) power. In this machine the boiler surmounted the engine, the whole being fixed on a strong wrought-iron girder foundation.

Messrs. RANSOME, SIMS & JEFFERIES (Limited), of Ipswich, vied with their competitors in their exhibits of this class of machinery, and it is only fair to state of this extensive and renowned firm that they did not lose by comparison. The most powerful engine displayed was a 12 horse-power, semi-fixed, with reversing gear, &c. It was especially adapted for purposes where economy in space has to be considered, and appeared a very suitable one for a contractor, sawmill, &c. Two portable engines of six and eight horse-power were noteworthy features, and we were much pleased with a three-horse (nominal) vertical, having a cross-tube boiler, designed for purposes where a small amount of power, and at intervals, is only required. In many building operations, or in a small contractor's yard, this engine would be found of great use, and it can be very economically worked, and its price is very moderate. There are other appliances in the collection of this firm adapted to the requirements of the builder, and an inquiry for their contractors' list will be courteously attended to.

Another firm located at Ipswich who have secured popularity for their engines is Messrs. E. R. & F. TURNER, of St. Peter's Ironworks. Although the firm do not enter so extensively into the manufacture of engines as some of their competitors, the articles that leave their workshops are good and reliable machines, and moderate in price. They were among the earliest makers of portable engines, having exhibited one at the Royal Agricultural Company's show at Norwich in 1849. They contain all the latest improvements generally found in such appliances, are well proportioned, and it is claimed that a higher average of efficiency is obtained in use. The Turner-Hartnell patent automatic governors, an invention of the firm, possessing some noteworthy advantages, are applied to their engines. The same remarks apply to their vertical engines and boilers adapted for contractors' and builders' purposes.

Mr. JAMES COULTAS, Spittlegate, Grantham, exhibited a portable engine and boiler, with a notable improvement for raising or lowering the chimney, which consists of a connecting-rod fixed to the top and extended to the lower part, where it is attached to a chain worked by an ordinary winch, and by actuating this the chimney is lowered to the required standard with ease. As compared with the mode hitherto adopted in engines of the portable type, which necessitated the attendant mounting it to effect the lowering of the funnel, this improvement will commend itself to all users of such machines, and it is somewhat remarkable that so clumsy and dangerous a plan as the old one has not been "improved away" long ere the present time.

The old-established firm of HORNSBY & SONS (Limited), whose extensive works are seen by the traveller on the Great Northern Railway as he passes by Grantham Station, as usual made an extensive display of most of their specialities. In the manufacture of traction and portable engines of different types this firm hold an advanced position, and at this show they exhibited a new portable engine that is worthy especial remark. It took the form of a compound portable of eight-horse power, resembling to some extent their inside cylinder-engines. The immersion of both high and low-pressure cylinders and the connecting passage in the steam-chest insures their being surrounded by the driest, and consequently the hottest steam, which forms the most perfect method of steam-jacketing, rendering the accumulation or even the appearance of condensed water in either cylinder almost impossible. This engine had also the automatic expansion gear, with eccentric controlling gear patented by the firm, and the most perfect minor appliances used by them, to render it as perfect a piece of mechanism as skill could devise. A six-horse traction engine of unique construction was also a commendable machine, and there were others shown possessing points of interest to the user, including a three-horse power vertical, adapted for electric-



lighting purposes, steady running being an essential point taken into consideration by the makers.

Messrs. CLAYTON & SHUTTLEWORTH, Lincoln, showed some first-rate steam-engines, patent lifting-clocks, lever and screw-jacks, &c. Among the former an 8 horse-power portable steam-engine is specially noteworthy. It possesses, in common with all the engines turned out by this firm, good boiler-room, increased cylinder area, fire-box of a capacity suitable for burning wood, coal, or other fuel, simple reversing eccentric, and one or two other recently-devised improvements to insure the utmost economy and durability.

Messrs. AVELING & PORTER, Rochester, exhibited chiefly traction and agricultural engines, but a salient feature of this firm are their patent steam rollers. The latter, which one now sees almost daily in one part or other of the metropolis, and which have come to be looked upon as indispensable for keeping in condition macadam or gravel roadways, are in constant demand. No contractor of any standing considers his yard complete without one of them, and the general adoption of these machines only affords another instance of the favour with which the substitution of steam for horse-power is regarded wherever practicable.

Messrs. NICHOLSON & SON, Newark-on-Trent, are another firm who manufacture a variety of portable and other steam-engines for industrial and general purposes as well as for agricultural use. They exhibited in the galleries a  $2\frac{1}{2}$  horse-power portable steam-engine known as the "Universal." It is a well-finished and compact specimen, and possesses many important points. The cylinder and slide-bars are cast in one piece and bolted to the crank brackets, the whole forming a continuous framework, and independent of the boiler, so that, if necessary, it may at any time be detached with facility from it for repairs or any other purpose. At the crank-shaft end the engine is bolted to a saddle-bracket, which is a permanent part of the boiler, and at the cylinder end it is carried on a V-shaped foot resting in a slide. By this it will be understood that expansion and contraction of the boiler will not affect the engine, so that the usual expansion stays are dispensed with, an item that considerably simplifies the working parts, and at the same time lessens the cost. Lastly, the boiler and many other portions are of steel, so that the maximum of strength with a minimum of weight is secured. A useful combined vertical engine and boiler, suitable for general purposes, was also shown here, the value of which is much enhanced by the hydraulic-flanged crown plate of the boiler; plate-flanging being a department in which the firm have of late much distinguished themselves.

Messrs. JOHN FOWLER & Co., Leeds, sent some admirable specimens of steam-engines, comprising a horizontal high-pressure engine with 10-inch cylinder, a compound semi-fixed "Yorkshire" engine, 10 horse-power (nominal), and a compound road locomotive mounted on springs, and also models of portable railways. The firm have for some time past been giving special attention to the compound principle in the construction of their engines, with the result that they now apply it to each one they build. Builders, contractors, and others will in future, when thinking of purchasing, do well to bear the following facts with regard to compound engines in mind. By the use of a low-pressure cylinder working in conjunction with a high-pressure cylinder, the greatest possible amount of expansion is obtained, and almost all the power in the steam is used before the residue is discharged into the atmosphere, the pressure of the exhaust steam being just sufficient to create a draught necessary for the combustion of the fuel. These engines will do the same amount of work with considerably less fuel and water than the ordinary single or double cylinder engines—in fact, there is a saving of something like 25 per cent. The working parts connected to each cylinder are equivalent in size, and the engine may be set going as readily as an ordinary double-cylinder engine by means of a valve-opening communication between the steam chests of the two cylinders, and so admits high-pressure steam direct to both. The cylinders are so proportioned that the work done is equally divided between them; and so much wear and tear occasioned by the shocks to which high-pressure single cylinder engines are liable is obviated. The waste steam from these compound engines also passes into the atmosphere at an unusually low pressure that there is little or no noise, and all danger from sparks prevented. Messrs. Fowler & Co.'s "Yorkshire" engine, as introduced by them some years ago, was, as we mentioned above, also shown, and it appears to have earned a reputation for economical working that will not soon be forgotten.

The EAST YORKSHIRE CART AND WAGGON COMPANY (Limited) occupied their usual position in the galleries with a good selection of carts, &c. This firm have a wide reputation as cart and van builders, and are useful manufacturers to contractors, corporate bodies, &c.

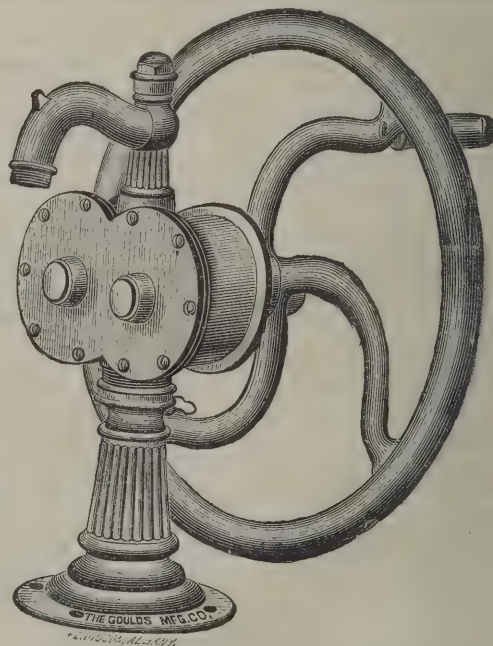
The BRISTOL WAGGON WORKS COMPANY (Limited) were also well represented, and their manufactures are well and extensively known both at home and in the colonies. One of their notable features as applied to carts is an improved tipping arrangement, worked by means of a powerful screw, which enables the cart to be raised to any angle, and retaining it in the position selected for tipping in heaps. As the back of the cart is not allowed to touch

the ground, a great saving in wear is effected by the prevention of the usual bumping or dragging along the road.

Messrs. R. & J. REEVES & SON, Westbury, Wilts, had amongst their exhibits a useful collection of water-carts, a department of their manufactures to which they devote much attention. An improvement was shown in their iron water-barrel carts, now made with wrought-iron wheels, the spokes of which are of strong half-round iron, rivetted in pairs. Most of these carts showed great strength combined with lightness and a minimum of friction or resisting power. They are useful alike for private use and for rural authorities, towns' use, &c.

Messrs. PFEIL & Co., St. John Street, E.C., had an attractive and useful display of engineering and other tools, and appliances designed for economising labour. A collection of chains and pulleys was also shown, and the firm may be recommended as a very useful one to the building trade as well as to the engineer. Some fine specimens of manganese steel attracted much attention. The fine texture and the ease of manipulation in the different purposes to which it was shown to be applicable were sufficient to satisfy those who examined it that it was calculated to play an important part in the future for many uses to which steel is applied.

An interesting exhibit was that of Messrs. F. ORME & Co., St. Andrew Street, Holborn Viaduct, comprising a variety of labour-saving machinery suited to the requirements of the engineer, carpenter, builder, blacksmith, cart and van builder, &c. Many of the machines are of American manufacture, the firm being importers of the best known appliances of the United States; in fact, it is not saying too much when we assert that most new appliances invented by our transatlantic friends suitable to the trades we have mentioned, soon find their way into Messrs. Orme & Co.'s stores. A variety of pumps were suitable for the contractor and domestic use generally. Notable amongst these was a hand rotary force pump of American invention and manufacture that we have selected for illustration. It is a most compact and powerful



apparatus for its size, is capable of lifting water from a depth of 25 feet, and forcing it to a considerable distance, and it is almost unnecessary to add will be found most useful under a variety of circumstances.

Another useful appliance in which the readers of this journal are generally interested, exhibited at this exhibition, was Brenton's patent safety bolts, shown by Mr. HENRY DENTON, the maker, of St. Peter's Works, Wolverhampton. They are adaptable for every purpose to which a bolt can be applied, from a small door to a railway truck. For the latter use they are made on the "cam" principle, while security is provided by means of a padlock. The security of the house bolt is effected by an easy and simple contrivance, and the approval it has received at the hands of jurors at various exhibitions, including the Royal Agricultural Society of England, and Continental and Colonial displays, clearly shows the interest with which it has been received wherever shown.

Messrs. J. & H. McLAREN, Leeds, are amongst the firms who appeared with machines that have undergone marked improvements. Their attention has been devoted principally to traction engines, with patent spring wheels, one of which was showed, and called forth considerable approbation. The alterations that have been made give the wheels a very increased degree of flexibility, combined with a general accession of strength. As now modified, each spoke is made up of three portions instead of being composed of one bar, as generally seen; and, instead of directly bolting the



spokes to the nave and outer rim of the wheel, each end of the spoke is turned up and held in its place by a steel clip, which being of what one may term a segmental shape, secures it with the utmost strength.

Messrs. DAVEY, PAXMAN & CO., Colchester, sent a collection of engines of such variety that all users of steam-power may have inspected them to advantage as much as the agriculturist, for whose especial benefit they were ostensibly on view. Portable, horizontal, and vertical were shown, and among the former class there was one specimen that possessed some unique points, its particular construction claiming to give increased facilities and efficiency in the working parts of the cylinder and slide-valve arrangements. The cylinder, slide-jacket, steam-jacket, and pockets for throttle-valve, safety-valve, and starting-valve are cast in one piece, with loose covers to each, so that all the parts are easily accessible. The crank-shaft, connecting-rods, and many minor fittings are of steel, thereby securing the maximum strength and durability without undue heaviness.

Among the engines sent by the READING IRONWORKS CO. (Limited), adapted for purposes other than agricultural, was one that they claim to be especially suited for driving dynamo machines. It is of the portable type, and has taken prizes on various occasions. The firm make and showed a specimen of a very convenient vertical engine and boiler, which they term the "Reading," and which they supply from 6 to 16 horse-power.

Messrs. R. GARRETT & SONS, Saxmundham, also sent a variety of compound and simple engines of various power, and applicable for most purposes. They had a novelty in the shape of a new patent spark-arrester, as attached to portable engines in which straw or wood may happen to be consumed. The arrester is placed close to the hinge of the funnel instead of at the top, where it is usually found; and this admits of the fireman lifting the funnel by a long lever or chimney-raiser, weighted to balance the funnel and sweep over the bed-plate into the smoke-box all the accumulation of soot and sparks. A new combined wood and iron wheel, shown for the first time, possessed advantages worthy of note.

Messrs. C. BURRELL & SONS (Limited), Thetford, showed traction and portable engines, with recently added improvements; and Messrs. SPENCER, CARTER & CO., Hitchin, W. TASKER & SONS, Andover, and Mr. W. P. ALLCHIN, Northampton, were present with kindred machines, all having points respectively peculiar to each, and well worth the inspection of intending purchasers.

## MR. MILLAIS ON MODERN PAINTING.

A CORRESPONDENT of the *Daily News* records a conversation with Mr. Millais relative to art. The first topic was the education of the artist. "It is very difficult," said Mr. Millais, "to understand where the mind of the painter comes in. His work has to be painted, and the highest intelligence is useless unless the man can produce with his fingers what his eye sees, and which, with certain mental distillation, should be at the end of his brush. What is the precise nature of this distillation it is not easy to say, nor can I understand how men whom you would call almost dumb are sometimes wonderful painters. Fred Walker, for instance, was rather a listener than a talker, and never had much to say upon any subject, yet the tender grace and delicate sentiment of his work were matchless, and actually astonished the French in 1878, who had never seen anything like his water-colours. Drawing and painting have their grammar, which can be taught and acquired to a certain extent like the grammar of speech or of music; but beyond this there is little to be done for a painter—everything by him. If I had a dozen young men painting in this studio of mine, the chances are that they would imitate my faults, as a certain French set do those of their master, who himself imitates nobody. You would have a quantity of young men painting alike, and turning out work of the Millais pattern of a kind of average quality. Who are the men who exercise influence? The very ones who have worked almost alone."

Mr. Millais next referred to the quantity of examples which are available for the student in English galleries and museums, and in foreign cities which can be reached without much expense. He added:—Raphael and Michael Angelo had comparatively little to study from but nature and a few antiques, trifling in number compared with those open to the modern student. All that previous work can teach him he can learn if he pleases, and at the Royal Academy we teach him the practical work of drawing and painting. So far as my own experience of a dozen years goes, it is of little use telling a student how to paint. The teacher must take the brush in his hand and show him how it is done. Painting is up to a certain point, and always in its execution, so purely technical a thing that it must be learned like sewing or sawing, filing or turning, from actual instruction and by great attention and practice. This manual dexterity, like the art of drawing, can thus far be acquired, like some knowledge of colour, composition, perspective, and so forth; but only up to a certain level, beyond which painting worthy of the name is too subtle a thing to be passed from hand to hand or from mind to mind. I have read

most of the best books on art, and I do not see it explained. I just quoted Walker, whose poetry seemed to be in his fingers only, and who, apparently, did exquisite work, as the violet has a sweet scent—naturally. Some students acquire manual skill far more rapidly than others, but nearly all may become so far proficient in time as to copy and sometimes fairly to imitate. But I need not tell you that painting of a high class begins where all this leaves off. It is when the student has assimilated the knowledge of others, and acquired the power of using his brush freely, that he has a chance of throwing all this aside and becoming a genuine painter. The strength to make this bound over the limits of teaching is not given to all, but it is this which defines the painter's work as original. Probably very few good painters could exactly define the moment of their emancipation, which is often slower than their canvases would indicate. This process, however, comes later, and has little to do with the actual technical teaching we are now giving our students at the Royal Academy.

The class of works now patronised was afterwards introduced. We are living in an age of transition, said Mr. Millais. The old order of things is giving way to what is newer, if not better. There seems to be a demand for truth—for actuality. The reason that historical and large *genre* pictures are now less painted than formerly is, as it seems to me, that there is much less heart in the work. Probably the painter does not believe in it, nor the public either, so much as they once did. Would any body now buy, much less paint, any of those friends of our childhood—*Alfred in the Neatherd's Hut*, *Canute and his Courtiers*, or *The Finding of the Body of Harold*? The painter might laugh at his own work. There is still an interest in works of a devotional character; but the passionate, intensely realistic, and Dante-like faith and worship which inspired the Old Masters is extinct, or nearly so. It is the difficulty of giving agreeable reality to sacred subjects which daunts the modern artist, living in a critical age and sensitive to criticism. I should like very much to paint a large devotional picture having for its subject *Suffer Little Children to Come unto Me*. I should feel the greatest delight in painting it; but the first question which occurs to me is, What children do we care about? Why, our own fair English children of course—not the brown, bead-eyed, simious-looking children of Syria. And with what sense of fitness could I paint the Saviour bare-headed under the sun of Palestine, surrounded by dusky, gipsy-like children, or, on the other hand, translate the whole scene to England? The public is too critical to bear this kind of thing now, and I should be weighed down by the sense of unreality in treating a divinely beautiful subject. The world is much older than it was thirty or forty years ago. It not only knows more in reality, but is more knowing in its attitude.

Mr. Millais also spoke on portraiture, and on the influence of costume, a subject which was lately treated by a writer in this journal (*The Architect*, November 29).

"It is," said Mr. Millais, "difficult to institute comparisons between painters, but the fathers of the brush may fairly be compared with the early poets both as to the sincerity of their work and the necessity for studying it in its proper light, and, so to speak, in its own language, with a glossary. There is much that is noble in them, much to admire and to honour, although their work is entirely different from that of Velasquez and Titian, Rembrandt and Vandyck. The portraits by these great artists are marvellous alike in realism, in dignity, and in superb technical execution. Portraiture until just of late has perhaps hardly been accorded its proper dignity in England. A good portrait is an historical picture in the most exact sense. It is not the portrait of a model in clothes which do not belong to him, but a picture of a more important person who forms a part of the history of his time, and it is always real for centuries on centuries. The brush-work of Titian and Velasquez, their superb technical skill and realistic but dignified transcript of their time, may endure for ever."

"I am much occupied in painting, and have hardly time to note and cite authorities, but my impression is that the costumes we think superbly picturesque were laughed at when they were worn. I know that the ruff we admire was the prime butt of contemporary satire, like the puffings and slashings of Henri II. and Henri III. In the latter reign there was a great outcry against the ruff, and there are pictures in which persons are represented with yellow ruffs. Again, the wigs of Louis XIV. and the Queen Anne period were considered absurd while they were worn, and were held up like other articles of dress to scorn and derision by Molière and others. The wigs of this period were very roughly treated by Hogarth, and the Directory and Empire costumes have only just of late grown old enough to be thought beautiful, while the more recent crinolines make some of Leech's drawings of pretty girls seem grotesque. A thing which is just old-fashioned without being old enough to have been refined by the touch of time is apparently always thought hideous, while the fashion of the present hour is generally laughed at. It is quite possible that the textures and colours we are now obliged to paint will not in the future seem either commonplace or hideous. There is infinite variety in modern shooting or riding-dress, and even black itself is not a bad colour for a portrait. It seems to have been held in high favour by Velasquez, Vandyck, and Rembrandt. Rough



tweeds, velveteen, and corduroy look ordinary and perhaps mean to our eyes, but two hundred years hence they may possibly be admired, as we admire the costumes called after Henri II., Henri III., and Louis XIII."

In conclusion Mr. Millais said:—"I do not know any more encouraging sign of the condition of art in England than the general high quality of illustrations in newspapers and periodicals. The improvement in the general goodness of such work has been extraordinary. Nothing is easier than to find fault; but, to me, the progress made during the last few years has been most satisfactory. There is no need to despair of art in this country."

### JUDICIAL DEFINITION OF "SITE" AND "FOUNDATION."

AN important case was decided in the Queen's Bench Division on Saturday, after arguments which lasted during two days. The judgment will affect metropolitan and other works henceforth. The facts were as follows:—

On June 17 last two complaints had been made by Mr. Thomas Blashill, district surveyor of Bethnal Green, against Mr. George Chambers, a builder. One complaint charged the respondent with having on March 13 last unlawfully committed breaches of the by-law made by the Metropolitan Board of Works under the provisions of the Metropolitan Management and Building Acts Amendment Act, 1878, by commencing to build on a site and foundations at the south-west corner of the Peel Grove Burial Ground, which had been filled up with materials impregnated with human bodies—without the said animal matter having been first properly removed. The other complaint charged the respondent with breaches of the provisions of section 17 of the same Act (41 and 42 Vic. c. 32), in not having pulled down and removed a house built by him on the spot in question, and in having failed to comply with a notice given to him to that effect by the appellant. The piece of ground in question formed part of an old private unconsecrated cemetery which had been closed by an Order in Council in 1855, when, as it was estimated, from 18,000 to 20,000 persons had been buried in it, a large number of whom had died during the visitation of cholera in 1849. Some interments were made on the piece of ground built upon by the respondent, but by far the greatest number in other parts of the cemetery. After 1855 the surface of the cemetery had been raised by depositing thereon builders' rubbish to a depth varying from one to four feet. Early in 1883 the respondent had given notice to the appellant of his intention to build upon the south-west corner of the ground, and had commenced excavating the builders' rubbish for the purpose of laying the foundations of the buildings so intended to be erected by him. The appellant had thereupon given him notice that he should require him to remove any objectionable matter (as laid down in the by-laws of the Metropolitan Board of Works) which might be met with down to the bottom of his foundations, and that if he interfered with bodies in making such foundations, he (the appellant) should have to take proceedings, and presumed the parish would do so too. The by-law referred to by the appellant was made pursuant to section 16 of 41 and 42 Vic. c. 32. Section 14 of that Act is as follows:—"The term 'foundations' shall mean the space immediately beneath the footings of a wall. The term 'site' in relation to a house, building, or other erection shall mean the whole space to be occupied by such house, &c., between the level of the bottom of the foundations and the level of the base of the walls." The by-law in question is in these terms:—"No house, building, or other erection shall be erected upon any site or portion of a site which shall have been filled up or covered with any material impregnated by or mixed with any faecal, animal, or vegetable matter . . . unless or until such matter shall have been properly removed by excavation or otherwise from such site. . . . The site of every house or building shall be covered with a layer of good concrete at least six inches thick . . . unless the site thereof be gravel, sand, or natural virgin soil. The foundations of the wall of every house or building shall be formed of a bed of good concrete not less than nine inches thick, and projecting at least four inches on each side of the lowest course of footings of such walls." The respondent had, in fact, made a bed of good concrete 18 inches thick immediately beneath the footings of his walls, and had covered the whole space intended to be occupied by his buildings with a layer of good concrete 12 inches thick. No portion of the soil which had formed part of the cemetery had been moved or disturbed by him, as his foundation and layer of concrete were all above the lowest part of the builders' rubbish which had been deposited on the cemetery after 1855. It was, however, also proved before the magistrate that the natural decay of human bodies might lead to subsidence so as to cause fissures in the concrete, however thick, and to the emanation of noxious gases. It was contended before Mr. Hannay, on behalf of the appellant, that the meaning of "site" and "foundation" was the natural virgin soil of the earth, and that this soil having been taken away, and the cavity having been filled up with dead bodies, made the "site" and "foundation" lower down to the extent of the depth of the graves (many of which were 20 feet and even

25 feet deep) than it had been before. On behalf of the respondent it was contended that the meaning of "site" and "foundation" in the by-laws was that placed upon it by section 14 of the Act (41 and 42 Vic. c. 62), or that the by-law must be regarded as *ultra vires*. The magistrate decided this question in the respondent's favour, and that the foundation and site of the buildings erected by Mr. Chambers had been prepared in accordance with the by-laws. Mr. Hannay being further of opinion that the first part of the by-law was not applicable to the present case, as he considered human bodies buried in coffins not to be "materials impregnated with animal matter," dismissed both the summonses.

Sir Hardinge Giffard, Q.C., and Mr. Besley, instructed by Mr. Burton, appeared for the appellant; Mr. Gainsford Bruce and Mr. W. Graham were for the respondent.

Mr. Justice Grove, in his judgment, said he was of opinion that the magistrate, before whom the same argument had been used as before the Court, had rightly decided the case, and that the respondent was entitled to judgment. It was difficult to give a perfectly logical interpretation to the definition of "foundations" in the Act now in question, but the only reasonable construction, as he (his lordship) thought, was that it meant the actual portion of the ground to be covered and pressed upon by the lowest part of the walls of a building. As to the definition of the word "site" in the Act, it was equally difficult to give it a strictly logical construction, but, as he read it, it meant the place which the building filled up and on which the house was to be placed and not its *locale*. The words "foundations" and "site" in the by-law, unless obviously used in a different sense, must be construed in the same sense as that in which they had been used in the Act conferring the power to frame such by-law. The appellant asserted a right to have the whole of the soil removed as being impregnated with animal matter; and in his (his lordship's) opinion it was so impregnated. But the question was whether or not the case came within the terms of the by-law, and whether a rational construction of this by-law required a different meaning to be given to the word "site" in it to that which it had in the statute. In the latter case, as he thought, the by-law would be clearly *ultra vires*. In his (his lordship's) opinion the power claimed by the appellant was neither reasonable nor such as had been given him by the Act in question. With the first part of the decision of the magistrate he agreed, and holding, therefore, that the proper construction of the Act and of the by-law was as contended for by the respondent, he must hold opinion that the appeal must be dismissed.

Mr. Justice Hawkins, in concurring, said that on looking at the facts of the case as stated by the magistrate it was clear that the foundations made by the appellant were even better than the statute or the by-law required them to be.

Mr. Besley asked that the appeal might be dismissed without costs. The cemetery had been closed by Order of Council in 1855. The ground for the graves had been sold in perpetuity to the relatives of those interred there, and now the land had been dealt with by the freeholder in another way, as there was nobody now surviving to enforce the rights conferred forty years ago. The appellant was not contesting the case in his own interest, but really in that of his lessor.

Mr. Gainsford Bruce said that that was not really so, as the appellant had covenanted to erect the buildings on the land.

The Court refused to make any order as to costs, on the ground that there was nothing in the case to make it an exception to the rule that an appellant had to pay the costs of an appeal in which he was unsuccessful.

### LOCAL HISTORY AND ANTIQUITIES.

AN address was delivered by Mr. E. A. Freeman, Regius Professor of Modern History in the University of Oxford, at the *conversazione* of the Lancashire and Cheshire Antiquarian Society, which was held in the Manchester Town Hall on the 11th inst. Professor Boyd Dawkins, the President of the Society, took the chair, and in referring to Professor Freeman said they all knew that history and antiquarianism are most intimately connected, and that really the principal duty of the antiquarian pure and simple is to act, if he might use the phrase, as a sort of jackal to the historic lion who came along and devoured what the jackal pointed out, and put it into books fitted to delight the world.

Professor Freeman, in the course of his address, said it must be remembered that general history is to a great extent made up of local history. One did not know the history, say, of England, unless he knew the history of the several districts and towns of England—unless he knew their characters and what distinguished them from each other. Take, for instance, two cities at almost the two ends of England—take Carlisle and Exeter. Carlisle had several things peculiar to itself. It was a city which remained in ruins from the Danish invasion till the latter end of the eleventh century. It was then called into being by William Rufus, and remained from that date, as long as there was any quarrel between England and Scotland, the great border fortress of England against Scotland. Thus Carlisle had a marked and characteristic history which distinguished her from every other spot in the king-



dom. It had a history which formed a very important part of the history of England. Exeter in like manner had a history peculiar to itself. Amongst all the great cities of England Exeter was the one whose life was the most uninterrupted, which had gone on from the most early times till now without any break. In the case of Chester, Bath, and many other places, we know for certain that they lay desolate for longer or shorter times. We know for certain, or we might infer with great probability, that the like thing happened to some other cities. To Exeter we knew it never did happen; there was no break in the life of Exeter from the beginning. So they might go on to nearly all the chief towns of England, and find something in the history of each which distinguished it from all others. Assuredly, in those two shires which formed the working ground of that Society there was a great deal that was very curious and very distinctive, both in early and in later times. First of all, do not let them be angry with him—do not let them cry out at him for speaking treason against local prejudices—if he said that the first thing that seemed to him amazing was that there should be such a county as Lancashire at all. He knew nothing about it; it did not come into being till after his period of history. He knew Cheshire perfectly well and Yorkshire also, but he did not know about Lancashire. It was not mentioned in Domesday-book. He found that there was a county of Cheshire which occupied a very marked position in Domesday, indeed stood out as having a greater degree of separation and independence from the mass of the kingdom than any other part of England. They had the great Earldom of Chester, in which the Earl had powers that hardly any other subject in England possessed, and held almost the position of a king within his own earldom. Chester formed one great principality in that corner of England. There was another great principality held, not by a lay lord, but by a spiritual lord, further to the north—that was the Bishopric of Durham. Now, supposing all the earls and bishops had had the same powers as those, what would have come to pass? England would have been broken up in the same way as Germany and France were broken up, and instead of a united community there would have been a collection of principalities, perhaps separate from each other or perhaps united by some loose tie or other. But the policy of the Conqueror forbade the creation of anything like an independent power, except on the borders of the kingdom. The Earls of Chester, Shrewsbury, Hereford, and Northumberland, and the Bishop of Durham occupied a separate position, because they had to guard the frontiers of the kingdom, and were therefore favoured with exceptional privileges and exceptional powers. Of all those quasi-independent powers, the Earldom of Chester and the Bishopric of Durham were the two which stood out most distinctly. Then in the district in which they were met they had, as they found it in Domesday, a remarkable state of things. As he had said, there was no such county as Lancashire in Domesday. It was Cheshire up to the Ribble and Yorkshire beyond. That was his geography. But a certain part of Cheshire—the land between the Mersey and the Ribble—was marked out in a special way, although it had no name. If we studied the entries in Domesday with regard to this land, we saw a great deal that was very curious and instructive. The whole land, it appeared, had been in possession of one man, who was not called an earl but had something like the position of an earl—that was Roger, the son of the great Roger of Poitou. Every Lancashire and Cheshire antiquarian must know that the tenures of the land in Roger's land were very singular. We found certain persons spoken of as thanes, but they had nothing like the position of thanes in other parts of the country, and seemed to have had to render very burdensome and mean services. In Cheshire and the land between the Mersey and the Ribble there was material enough to employ a good number of workers for many years in working out the minute details. At Hull, the other day, he pointed out that there was one remarkable difference between France and England. In France the oldest towns in the country, those which were first founded and those which were the greatest in earlier times, had remained, with very few exceptions, the chief towns to this day. As a general rule, it would be found throughout France that the chief towns were the old capitals of the Gallish tribes. The only town in France which had risen from a very small condition in recent times and had become one of the chief towns of the land was St. Etienne. But here in England the rule was exactly the contrary. The oldest and most famous cities in England were no longer the greatest. If we wanted striking proof of that we need not go further than the clauses of the Redistribution Bill. Liverpool was, according to that Bill, nine times as great as Exeter. That, he confessed, almost took his breath away. He supposed it was all right; he supposed we must arrange things according to the facts, yet somehow he did not exactly like it. Some among them might think that Exeter should have kept its two representatives and Liverpool have gone on with one or two less than nine. If a Redistribution Bill of that kind were introduced in France, Lyons and Marseilles would still be left at the top of all the towns except Paris, as they had been as far as the history of the country went back. In that district was one of the great and famous cities of England. He had not got the whole of the Redistribution Bill off by heart, and was not sure whether Cheshire would keep even a member or two. But there was Deva, the City of the Legions,

which still retained large portions of its Roman walls and its mediæval walls nearly perfect; there was also that Chester which was the last city in England to submit to the Norman conqueror, and which had played a great part in this country ever since. He had no reason to believe that Chester had gone back or places had gone on faster. When we came to its new rivals, above all to Manchester, there was a great deal that was very instructive in history. After all, such towns were not new places. There were very few places in England which had absolutely sprung out of the ground, like so many of the great towns in America had. All the places to which he referred had a history. In proof of that he would take three great towns in England—Manchester, Liverpool, and Birmingham—the importance of all of which was modern; the places themselves, however, were not of modern birth. They existed from the beginning as small places; in later days they had come to be great, and had outstripped other places. All those places, therefore, were not modern in their origin, though they were in their history. If any one who had the local knowledge would go through the earlier history of the other places which had grown to importance in later times, it would be found that they, too, had peculiarities and distinctions which might be worked out in the same way. Wherever we went we could learn some lesson on the spot which could be applied either directly or by way of analogy to the study of the history of our own country, and then we could turn the history of our own country to account in considering the general history of Europe and of the world. In studying that general history it would be noticed that after all the towns and cities of England, old and new, did not rival in many respects the great cities in some lands on the Continent. That was because the cities and principalities on the Continent broke away from the general power and set up for themselves. Each place standing thus by itself had had a great history, and had erected magnificent buildings surpassing anything we had in this land. On the other hand, that history and prominence were purchased by separation, dissension, and wars between different places. In England, however, the separate parts had never had the same independence nor the same importance. For that reason even our ancient cities had not so much to show as many less cities had on the Continent. Our history was the history of a united people, and what prominence was taken away from particular places had added to the general importance of the whole. A local antiquarian society like the one he was then addressing should work out things from that point of view. They should work out the history of every district, and not simply the history of towns, but the history of the smallest villages, for they must remember that such local history was part of the history of England, and that the history of England itself was only part of a greater whole, the history of Europe.

#### A JOHNSON MEMORIAL.

A TABLET was placed in 1865 on the house in Old Square, Birmingham, which was in the last century occupied by Mr. Edward Hector, a surgeon. It recorded that Dr. Johnson was a guest in his friend's house. When the house was pulled down in connection with the operations of the Birmingham Improvement scheme, the wainscoting, the door, and the mantelpiece of one of the principal rooms were preserved by the Improvement Committee of the Corporation with a view to their ultimate use as a memorial of Dr. Johnson. This object has now been achieved through the zeal of the members of "Our Shakespeare Club" and the Archæological Section of the Birmingham and Midland Institute. These gentlemen, with the ready consent of the Improvement Committee and the Baths and Parks Committee, have had the relics used in the decoration of a room at Aston Hall, hereafter to be known as "Dr. Johnson's Room." The panelling is supposed to have been constructed in one of the years between 1814 and 1820. It is of English larch, the place of which is taken in modern times by deal, and is well raised and deeply moulded. When it came into the hands of the donors of the memorial it was grained oak, but Mr. J. A. Cossins, architect, who, as a member of the Archæological Section, has superintended the work, discovered that the original colouring was a dead pale blue, something like the modern peacock-blue. This colour has been accurately matched, and the walls of the room, which are covered from floor to ceiling by the wainscoting, now present almost precisely the same appearance as those of the room in which Hector and Johnson, and his friends, no doubt had many learned friendly chats. The room selected is No. 17, formerly one of the Chinese rooms, and the old-fashioned mullions of the window (which looks out on the statuary pavilion) harmonise tolerably well with the present covering of the walls. It is intended that the apartment shall contain such memorials of Dr. Johnson as may be given or lent to the Corporation. At present the room is almost bare. The tablet already referred to has been placed in the room.

M. Clermont-Ganneau is about to publish a volume on the Shapira and other frauds, which he discovered in connection with the archæology of Palestine.



## NOTES AND COMMENTS.

ALTHOUGH there is a defect of nineteen millions of francs in the Belgian budget, the authorities of Brussels are taking steps to uphold the building trade in the present crisis, having a conviction that eventually it will be the more economical policy. Several works on a large scale are to be undertaken in the city. A boulevard is to be opened out from the Etterbeck Barracks to the Avenue Louise. Quarters for firemen are to be constructed near the Place de la Liberté. The buildings of the old Palais de Justice are to be transformed into part of a communal museum, and from the position no better arrangement could be adopted, as the new museum will be near the Palais des Arts et de l'Industrie. A theatre is to be built on the site of the Entrepôt near the Canal Basins in the north-east; an Eden theatre, on an immense scale, has been commenced near the Bourse. Not far from it will be the new Bureau des Postes. Several commissions for statues for public places are also to be given to sculptors. The outlay for all these works will be enormous, and it is not surprising that in Paris there are people who are envious of the financial resources of the Belgians.

THE death of M. JULES BASTIEN LEPAGE removes a man who was likely to have exercised a great influence on French art. The son of peasants, his sympathies were with the toil-worn country people, and, without being in any way an imitator, he followed MILLET and COURBET, COROT and DAUBIGNY. He was one of those men in whom opposite qualities are found. It was difficult to say whether he was more a realist than a mystic, and works which were akin to those of the Impressionist school were finished with extreme elaboration. There is a striking rebuke to French luxury when a half-starved peasant is represented on canvas without any shirking of details, and it is not surprising that M. BASTIEN LEPAGE's patrons were often found outside France. An English painter who selected consumptive factory "hands" for subjects could not, for the same reason, expect to find purchasers among wealthy connoisseurs in this country. It was somehow characteristic of the age that, in the contest for the Prix de Rome, BASTIEN LEPAGE should be overcome by M. LÉON COMERRE, who paints those wonderful ballet-girls which in an exhibition are always surrounded by a crowd. A young man who introduced angels of a Mediæval type along with peasants that were more typical of French plainness than of academic beauty could hardly expect success, and it is creditable to the jury that he was awarded even a second medal. But his course was taken. His art was typified by the picture of *Joan of Arc*, where a genuine peasant girl, without any of the prettiness that is seen in the popular statuette by the Orleans princess, sees visions, and resolves to act upon the inspiration they give. He tried to be truthful without going out of his way in search of ugliness. There is lovely colour to be found in his canvases, as in the trees and vegetation in *Le Père Jacques*, and his portraits are among the best of modern works. Those of his father, of his brother (M. BASTIEN, the architect), of SARAH BERNHARDT (in profile), of ALBERT WOLF, are admirable. The general regret for his death is intensified when it is remembered that for two years or more he was aware that there was no hope for him in surgery.

A CASE which is of deep importance to surveyors was heard on Wednesday before Mr. Justice WILLS. In 1882, Mr. FARMER, of the firm of Messrs. DEBENHAM, TEWSON, FARMER & BRIDGWATER, was requested to value a wharf, at Blackfriars, belonging to King's College, Cambridge, which was required for widening the London, Chatham and Dover Railway. The valuation was 22,000*l.*, being thirty-three and a half years' purchase of the ground rent, with 200*l.* for compulsory purchase. The arbitrator awarded 20,000*l.* Mr. FARMER's account amounted to 121*l.* 16*s.*, being 118*l.* 13*s.* for inspection and report, and 3*l.* 3*s.* for attending as a witness. The larger fee was based on RYDE's scale. The college authorities paid 24*l.* 3*s.* into Court, being 20 guineas for the inspection. It was pleaded that there was no evidence to bind the defendants to pay according to RYDE's scale. Mr. Justice WILLS in summing up said that he should not leave the question of the alleged custom to the jury, as there was no evidence of any such usage or custom as would bind the outside public in their dealings with surveyors. The jury found

for the plaintiffs, but stated that the amount claimed was excessive, while there was no evidence to enable them to decide what was a reasonable remuneration.

M. CHARLES BRIAS, a well-known Belgian painter, died lately, at Brussels, in his eighty-seventh year. He obtained the first prize for genre painting in 1824. M. BRIAS took an active part in the Belgian Revolution of 1830. He was said to have been the first to enter the Park at the head of a band of insurgents, and in the attack he was wounded. All his fortune has been left to the hospitals of Brussels and Malines.

THE Chelsea Vestry intend to enlarge the vestry hall in the King's Road. The additions will comprise a vestry hall, with an area of from 3,000 to 3,500 square feet, a secondary hall with an area of 1,500 feet, a committee-room, kitchen and offices, reception and retiring-rooms, &c. The proposed outlay, exclusive of furniture and fees, is 15,000*l.* The first prize will be 100 guineas, the second 50 guineas, and the third 30 guineas. Should the author of either of the three designs be selected as architect the premiums will not be given. A professional assessor will be appointed to advise generally as to the designs after they are delivered. If, in the opinion of the assessor, a design cannot be carried out within 10 per cent. of the amount named, the competitor will be disqualified from receiving any premium. The drawings are to be on the scale of 8 feet to an inch. No perspective whatever will be admissible. The designs are to be lodged on or before February 23, 1885.

BELGIUM has supplied so few examples of the Bronze Age that archæologists have been puzzled. Great importance is therefore attached to the discoveries which have been made at Sinzin by members of the Archæological Society of Namur. In an ancient grotto several objects, such as buckles, pins, and knives were exhumed, which correspond in form and character with the figures in M. DESOER's book on the Bronze Age in Switzerland, and are therefore supposed to be of unquestionable character. It is remarkable that although a great quantity of bones of men, women, and children were found in the grotto, it is impossible from them to complete a single skeleton. A part of the frame is always absent. The conclusion has been drawn by some of the archæologists of Namur that the grotto at Sinzin was probably a place where offerings were deposited, rather than a cemetery. It is also supposed that the forest was the scene of Druidic or other rites, in which human victims were immolated. But until the report which is in preparation appears in the transactions of the Namur society, it is impossible to assess the value of the discoveries.

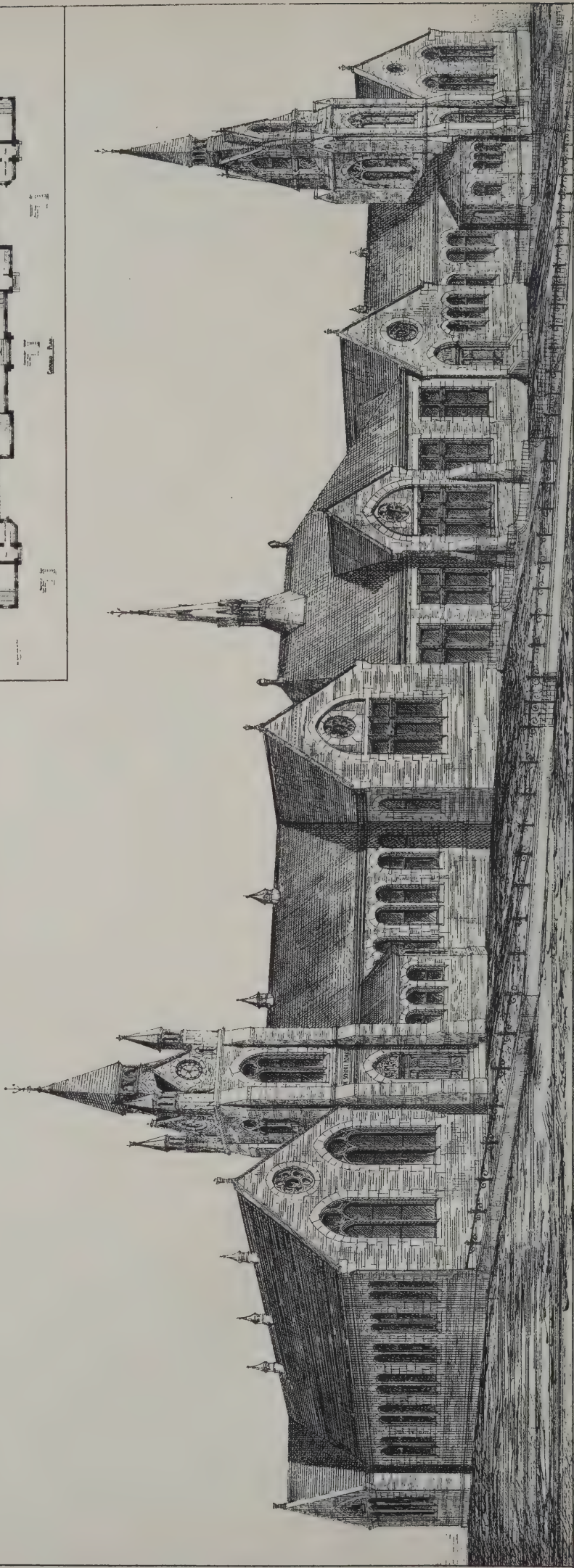
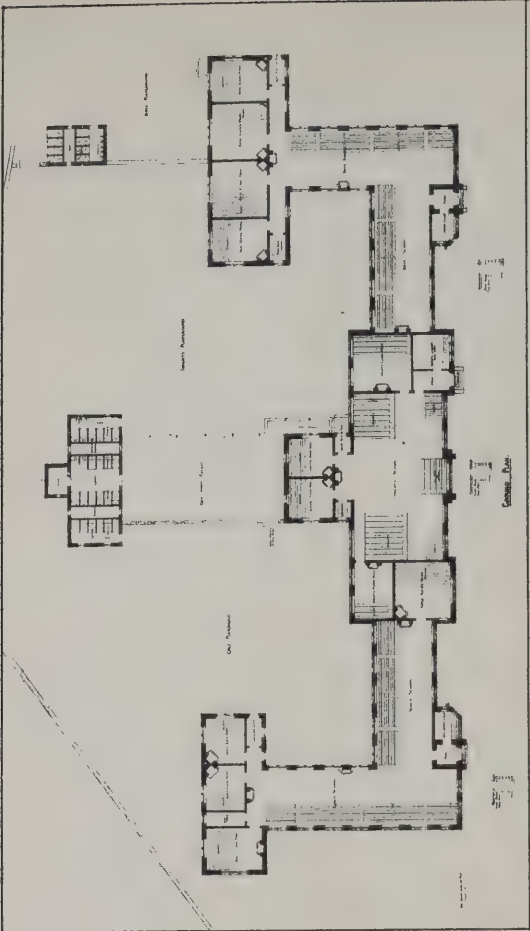
THE unfortunate dispute between the Bishop of PETERBOROUGH and the Dean has not suspended the efforts of the Restoration Committee. On Wednesday the following resolution was adopted:—"That the Restoration Committee is of opinion it is desirable that the Dean and Chapter adopt the first stage of Mr. PEARSON's modified plan for rebuilding and raising the central tower, and that the work be at once proceeded with, the committee recommending that a special fund be raised to defray the additional expenditure involved by this deviation from the original plan."

THE general depression seems to have had its influence on the production of Christmas cards, for this season the designs are less elaborate and expensive than those of former years. Considering the prices at which the cards are sold, it is surprising to find such good work. Messrs. RAPHAEL TUCK & SONS have, as usual, many delightful designs. Some which are quaint and humorous are specially designed for art patrons who are still in the nursery. Other cards are made attractive by music as well as drawing, and the entire collection shows skilful superintendence. Messrs. MEISSNER & BUCH, of Leipzig, depend mainly on floral designs, which are generally rich in colour. Messrs. HILDESHEIMER & FAULKNER have in the "Dream of Patience" produced the best card of the year. The dainty selection from BURNS is deserving of success. Mr. NOEL PATON's landscapes, with poetry by Mrs. CRAIK, are also tasteful cards. It is evident that the firm expends a large sum in securing designs,









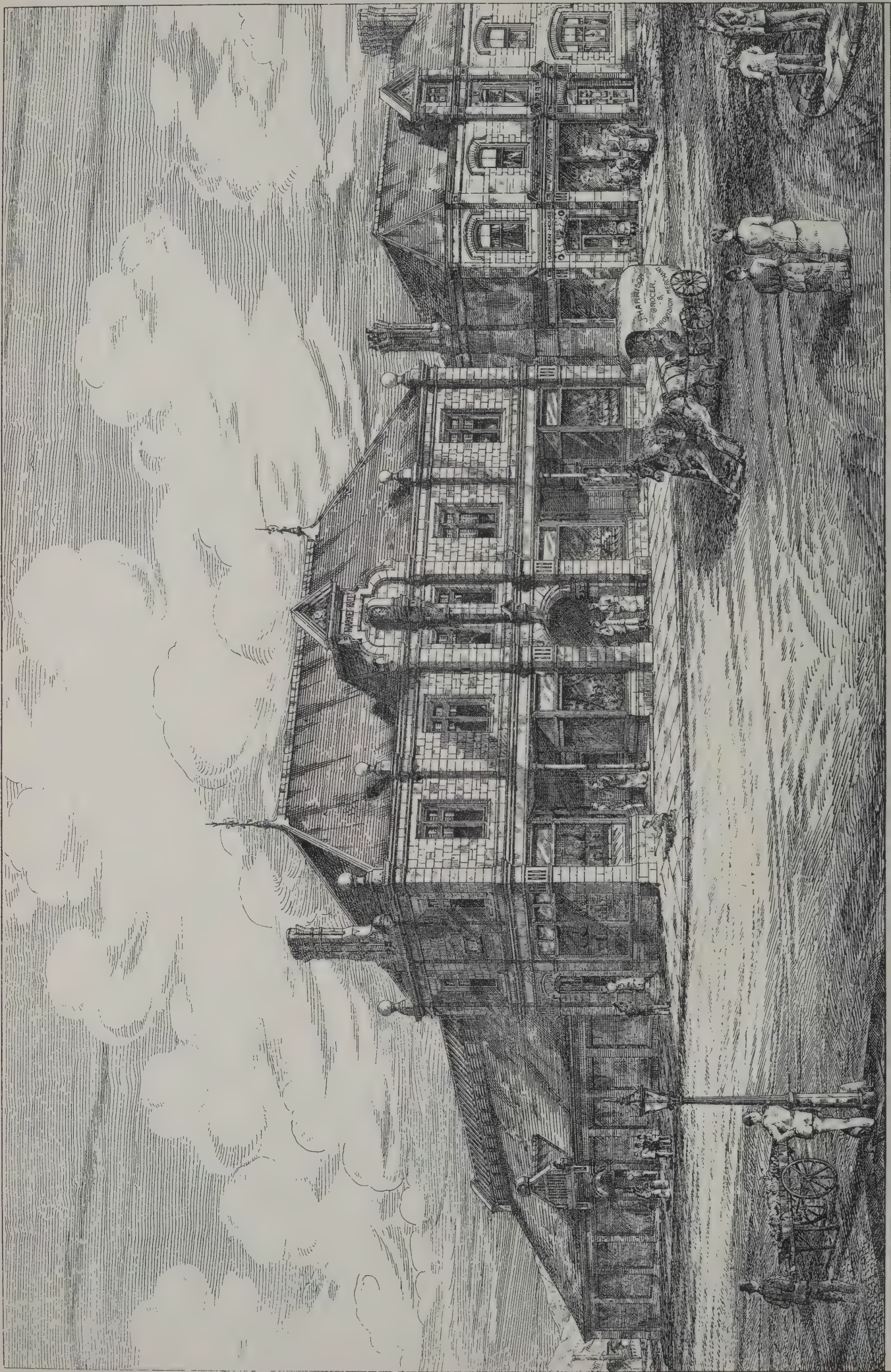
NEW BOARD SCHOOLS. YEADON

J. & C. 22, Mark Lane, London, E.C. 3. W. J. P. 1884







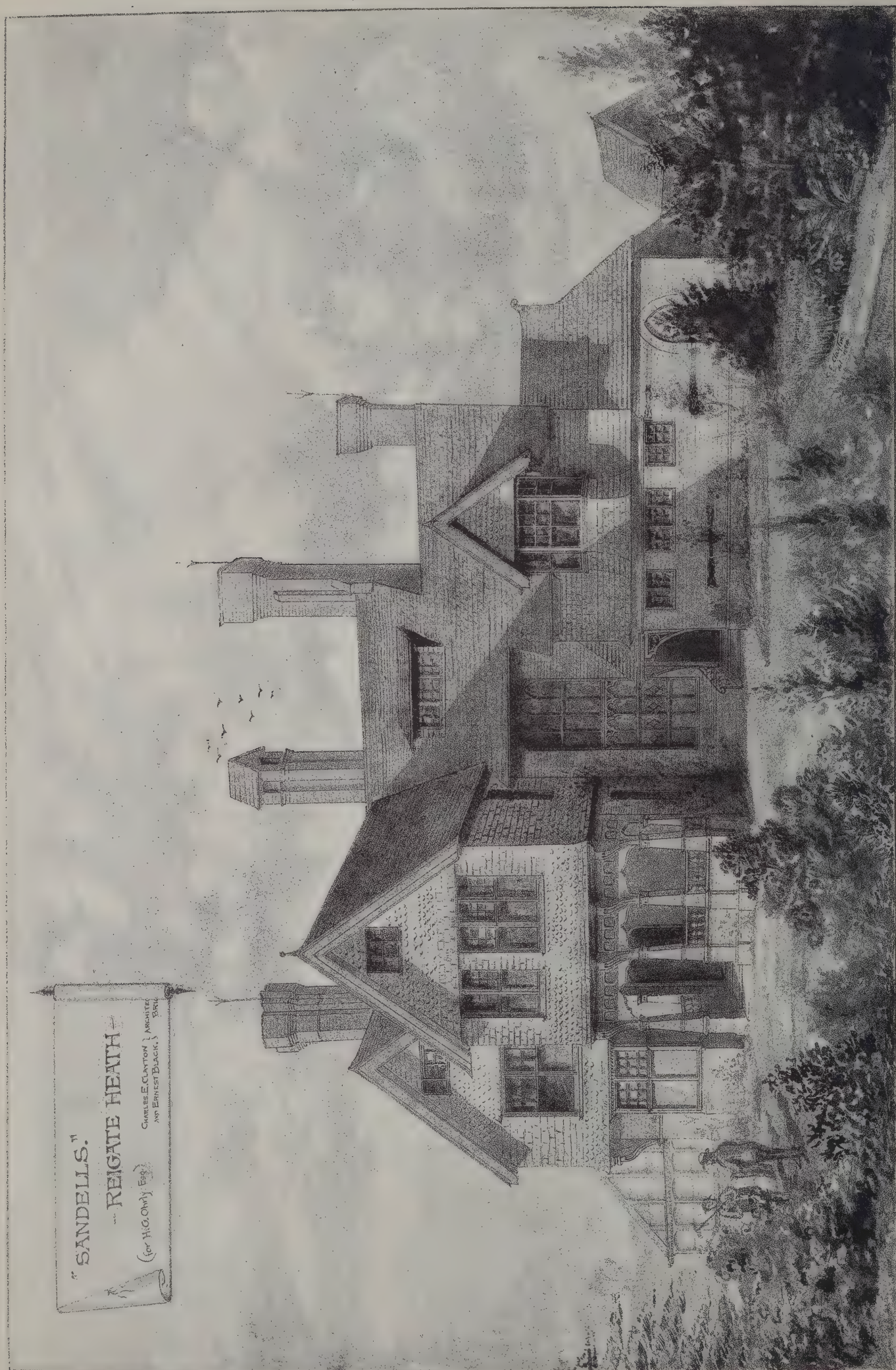


View of MARKET HALL • PUBLIC OFFICES • AND • SHOPS • F.B.W. VALE • E.A. JOHNSON • ARCHT.









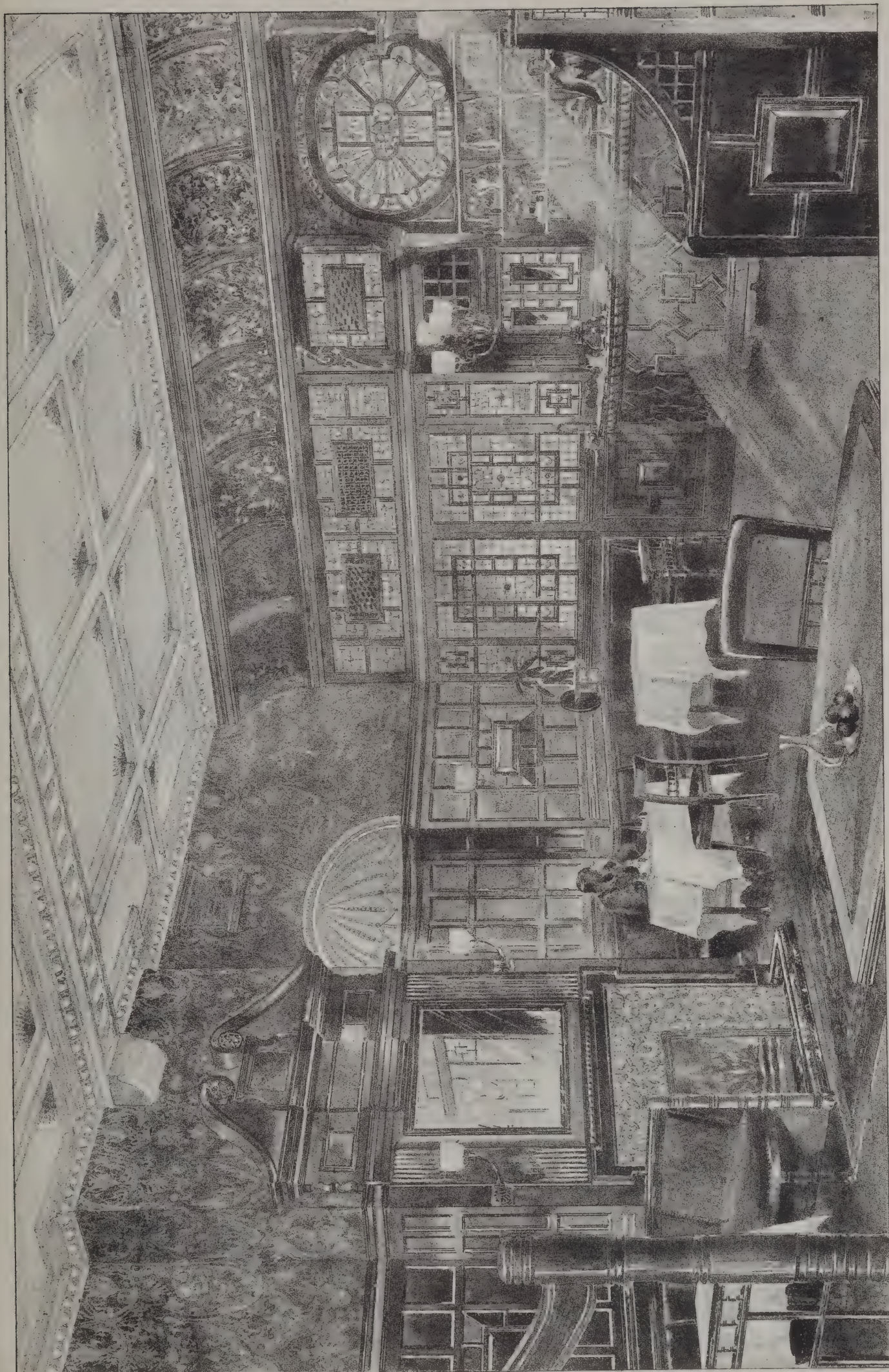
"SANDELLS."

REIGATE HEATH

(for H.G. ONLY)

CHARLES E. CLAYTON, ARCHT.  
AND ERNEST BLACK, BORN





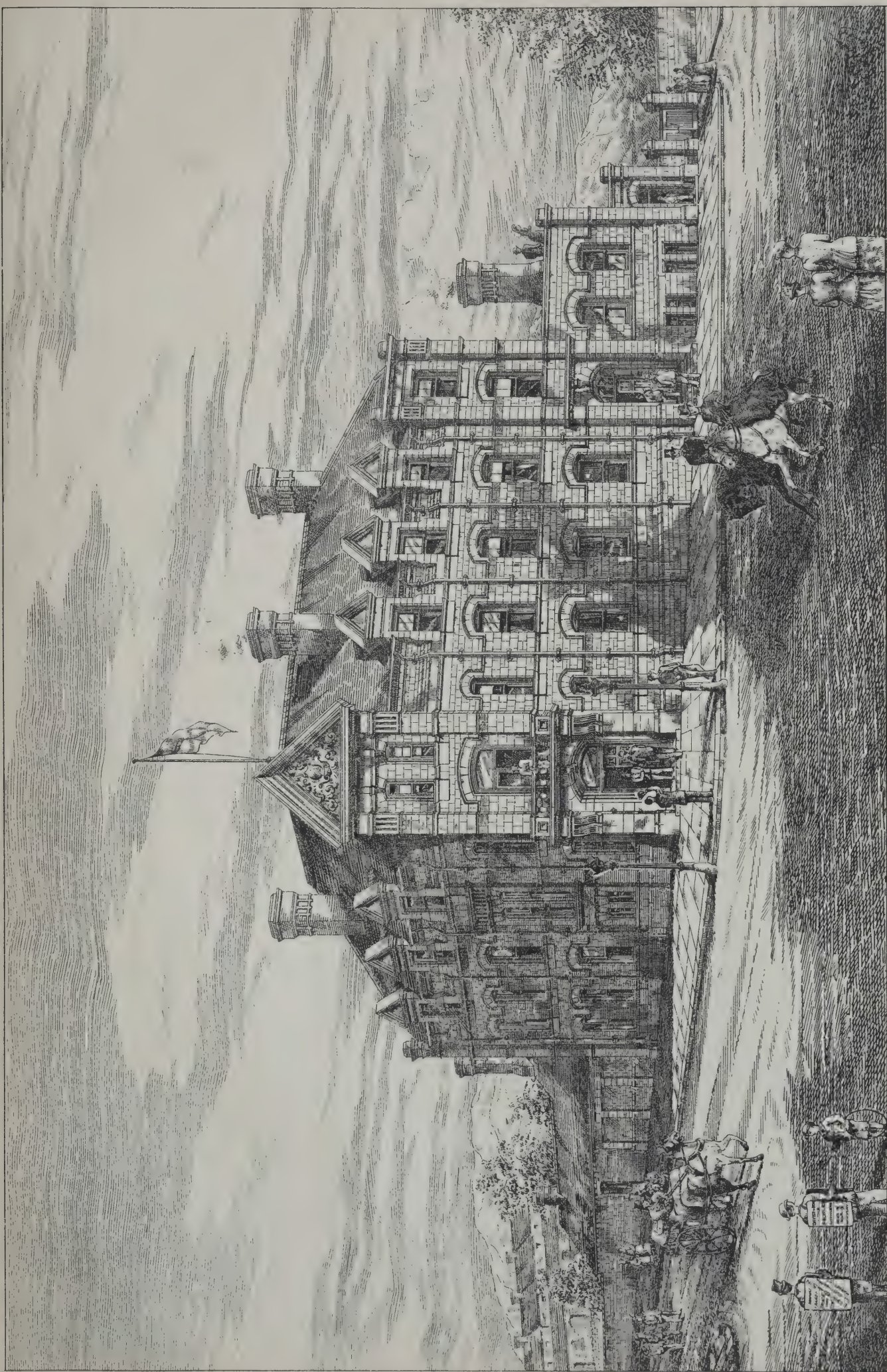
DINING ROOM, BRADFORD CAFÉ.

MESSRS MILNES & FRANCE, ARCHTS









• Perspective • View • of • NEW • HOTEL • PREMISES • FBBW • VALE • E • A • JOHNSON • ARCHT • ABERGAVENNY •









— CONGREGATIONAL CHURCH · WORPLE · ROAD · WIMBLEDON —

W.D. CHURCH · ARCHT.  
12 SOUTH PLACE · FINSBURY · E.C.







## ILLUSTRATIONS.

"SANDILLS," REIGATE HEATH.

THE house shown in the accompanying sketch perspective view has been recently built from designs by Messrs. CLAYTON & BLACK, of Brighton. It possesses one feature of interest as one of the few country-houses entirely lighted by electricity (so far as artificial light is concerned), the supply being generated during the day time, and stored in accumulators for use at night. The stables, &c., are lighted in the same way, the whole of the machinery being easily managed by ordinary servants under the direction of the owner, who himself arranged the details of the lighting system. Although the house is within reach of the gas service of a local company, it appears that the cost of the electric light is very little in excess of the price of gas, while the advantages of cleanliness, clearness, and purity are obtained.

THE BRADFORD CAFE.

THIS is the principal branch establishment, in Bradford, of the Bradford Coffee Tavern Company, and was opened in the early part of the year by Mr. ALDERMAN F. PRIESTMAN, the chairman of the company, as a high-class restaurant. It is situated in the principal thoroughfare—Market Street, at the corner where Booth Street intersects it.

The building was formerly occupied as a draper's shop with offices over, and has been completely gutted and transformed under the direction and from the designs of Messrs. MILNES & FRANCE, architects. The basement has been converted into a spacious and well-lighted grill-room, with service-room adjoining, and connected with the kitchen (which is on the top floor) by a lift. The ground-floor contains the dining-room illustrated to-day. Admission to this room is by a porch of American walnut, with swing doors, the panels of which are filled in with leaded quarries. The dimensions of the dining-room are 40 feet by nearly 30 feet. The dining-tables are arranged on two sides and in the centre, the seats being of the "settee" form, upholstered in frise velvet, and the whole of the woodwork is of American walnut. The walls up to the surbase moulding (which is of a good height) are panelled in the same wood, and above are covered with "Tynecastle tapestry" in two shades of yellow. The ceiling and beams are decorated in distemper. At the east end is the service-room, separated from the dining-room by the screen and counter shown in our illustration. The screen is glazed with coloured-leaded quarries, and in the centre has a "side-board" recess fitted with shelves and small doors communicating with the room behind. The counter is semi-elliptical in plan, and is of St. Ann's marble as to the top, and of American walnut as to the remainder.

The gas fittings were all made from the architects' designs by Messrs. FREEMAN & COLLIER, of Manchester. The fittings, upholstery, and decorations were carried out by Messrs. C. PRATT & SONS, of Bradford.

The upper floors of the building are filled up in an equally artistic style, the first floor being the smoking-room, and the second the billiard-room. Lavatory and water-closet accommodation is provided in each of these two floors. The alterations have involved an outlay of about 4,000*l*.

NEW MARKET HALL AND PUBLIC OFFICES, EBBW VALE.

THESE buildings have been erected by a limited liability company of local shareholders, at a cost of about 3,100*l*. The front portion consists of four lock-up shops, with a private room attached to each. Over these shops are the Local Board offices and large Board-room, with private side entrance. In the rear is a public market hall, 100 feet by 62 feet, arranged with small lock-up shops round the walls, fitted with galleries over, for the accommodation of part of an audience on the occasion of public meetings, &c., for which purpose it is also intended to use the market. The outer walls are of blue Pennant local stone, relieved with buff brick quoins, &c.

NEW HOTEL, EBBW VALE.

THE site is opposite the market buildings, with two extensive frontages of similar treatment. The work has been carried out by Mr. T. FOSTER, of Abergavenny, at a cost of about 2,900*l*., and the building will be opened at Christmas. Mr. E. A. JOHNSON, of Abergavenny, is the architect for both buildings.

BOARD SCHOOLS, YEADON.

THE building shown in the illustration has been lately erected from the designs of Mr. W. J. MORLEY (now of the firm of Messrs. MORLEY & WOODHOUSE, of Bradford and Bolton). Accommodation is provided for 1,070 children, the schools being divided into three departments. Those for the boys and girls are placed at either end, while provision is made for the infants in the centre. The department for boys consists of two large rooms, 53 feet and 75 feet long respectively, with a width of 20 feet in each, the height of the lock-couple ceiling being also 20 feet. That portion of the building devoted to the girls is similarly arranged, and each school has four large class-rooms opening out of the larger apartments. The infants' school consists of a room 60 feet by 32 feet by 22 feet high, and is provided with a similar number of class-rooms to the other departments. Separate entrances have been provided for each department, and in addition doorways have been fitted up at the back which give access to the playgrounds, of which there is one for each department. Covered grounds have been laid out for the girls' and infants, the latter having a covered approach leading to theirs from the school. The total cost is about 5,000*l*., including lighting and heating, and the expensive boundary walls. The interior wood is composed of varnished pitch pine.

The contractors for the work were Messrs HARGREAVES, masons, Rawdon; Messrs. TAYLOR, joiners, Yeadon; Mr. LUMB, plumber, Yeadon; Mr. EDWARDS, painter, Rawdon; Messrs. WHEATER, plasterers, Calverley; and Mr. STONER, slater, Bradford; Messrs. GREEN & Co., of Leeds, supplied the heating apparatus. Mr. KENYON was clerk of works.

CHURCH, WORPLE ROAD, WIMBLEDON.

THIS church was lately designed by Mr. W. D. CHURCH, architect, 12 South Place, Finsbury.

## ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE fourth ordinary meeting of the Institute of Architects took place on Monday evening, Mr. David Brandon, vice-president, in the chair.

The CHAIRMAN explained that the president, Mr. Ewan Christian, had accepted a friendly invitation to be present at a meeting that evening in Leeds, of the Leeds and Yorkshire Architectural Association, and had requested him to make that the apology for his absence.

## Semper's Theory of Evolution in Architectural Ornament.

Mr. LAWRENCE HARVEY read a paper on this subject, and prefaced it with a short notice of Professor Semper, who, he said, was considered in Germany to be one of the greatest architects that ever lived. He compared him with Wagner, the great musician, both Wagner and Semper being reformers in their respective arts. Semper was born at Hamburg, in 1803, and was the son of a wealthy manufacturer. His mother was a woman of Elizabethan type, possessed of great natural firmness and decision of character. All the works that Semper carried out, or only designed, were certainly works of the highest merit, but did not suffice to explain the unique position he held among his fellow-countrymen. Semper was convinced that the beginnings of art were to be found in the humble crafts which supplied the necessities of every-day life, and that even now that they exercised the greatest influence in forming our taste. He was one of the first to maintain the importance of founding museums of art work. He did not know what Semper had to do personally with founding the South Kensington Museum, but he was surprised to find that Semper's dream was first realised in England. Was it too much to believe that in private intercourse with eminent men who had started the art revival in England, Semper had many an opportunity of imbuing them with his ideas? Or was it accidentally? At twenty-two years of age he joined the School of Architecture in Munich, and became acquainted with Gothic style. From 1826 to 1830 Semper remained in Paris. His master there was Goux, and to him Semper owed his artistic principles. Later on Goux wrote of Semper's work that his book was a warrant that Semper had understood his teaching, &c. Semper left Paris, and travelled for three years in Sicily, Italy, and Greece, and on his return published a work. Then, through influence, he was appointed Professor of Architecture at the Academy in Dresden. A great opening was here afforded him, and what he did with his opportunities might be seen by the buildings in Dresden. In 18 Semper assisted the revolutionary party, helped to build the barricades, and had to fly for his life. Why he joined had never been explained. Some said he found the men were building the



barricades altogether wrongly, and that he could not resist setting them right. The most likely explanation was that Semper had probably joined the revolution through pique, after being checked by the authorities in one of his pet plans. In 1851 Semper became professor in the School of Design, Marlborough House, which he ultimately left to become professor at Zurich. Finally, he died at Rome in 1879. Mr. Harvey then proceeded with his lecture on Semper's work, and drew attention to the drawings, partly derived from the work, and explained them. The heads treated of in the lecture were as follow, but time did not allow the author to develop more than a few of them:—Personal ornament or clothing the earliest artistic effort of man. Classification of the arts which precede architecture and lend it ornamental features. Textile products, their primitive use in architecture, their imitation in decoration. The Oriental and the Greek principles of colour decoration. Influence of the use of flax, cotton, wool, and silk upon art in general. Embroidery the origin of basso-relievos, statuary, and painting. Upholstery of the ancients, polychrome architecture, chromatic scales, connection between costume and architecture. Study of the different ways of clothing structures in New Zealand, China, India, Mesopotamia, Egypt, Greece, Rome. The influence of pottery, carpentry, joinery, and metal work in the formation of architecture. Under the head of "The Clothing Principle in Architecture," Mr. Harvey said:—

Greek art is not of native growth, but is a development and combination of the Assyrian and Egyptian arts. In both these older countries decoration consisted in clothing the structures, either by covering their surface or by incrustation; in Greece the clothing of a building is neither material as in Assyria, nor imitative as in Egypt, where the bearing pillar seems independent of the lotus stems bound round it as an ornament, but in Greece the clothing is reduced to an abstraction, viz., is the colour which covers the buildings outside and inside. This Greek refinement must be attributed the absence of apparent joints in the stone walls of the cella, by which the construction is disguised as by a thin veil, so that clothing and construction are one, whereas with the barbarians they were mechanically not organically united. Nevertheless with the Greeks, as with the Assyrians and Egyptians, the essence of the decoration is the masking of reality. All temporary festal structures are ornamented by clothing such as garlands of foliage, bunting, tapestry, flags, and these short-lived erections served as models for the permanent monuments which replaced them. Solomon's Temple was a copy of the Tabernacle, in which layers of skins were replaced by gilt facings of cedar. The stone theatres of Rome succeeded to the wooden ones, the triumphal arches to the rough scaffolding of poles covered with painted representations of the Roman victories and of the spoils of the vanquished. It is in these temporary decorations that we discover art in its very first beginnings. Art's main characteristics have endured in its later developments, and clothing is still now the essence of all arts, of poetry, sculpture, and painting.

To follow Semper's argument on these points would carry us too far, so we must pass on to the study of the transformations in the clothing principle brought about by the change of materials and technical improvements. For instance, the wooden idol was first covered with festal clothes; secondly, the clothes were replaced by metal beaten on to its surface; thirdly, the wooden kernel of the idol was left out, and metal coating alone remained. Such was the construction of the oldest colossal statues of antiquity shown by Pausanias in his description of the statue of Zeus Hypathos on the castle of Sparta. Fourthly, casting was introduced in its early stage as a thin coating of bronze laid on a kernel of iron. Then, fifthly, hollow casting was invented. Such are briefly the principal stages in the historical development of statuary; and as marble and terra-cotta statues were perhaps later developments of statuary, we shall find that the history of architecture runs very much on the same lines, although, on account of the variety of building materials, architecture is a vaster subject of inquiry.

In the Exhibition of 1851 there was a model of a New Zealand village, wherein Semper was struck to find an instance of the art of plaiting applied to the making of walls for the defence of villages and houses, a fact which strengthened his conviction in the textile origin of walls. The tops of the piles which supported the woven walls were decorated with carved heads, which probably took the place of the heads of their foes.

The importance of China for the study of the origins of art is great. Primitive architecture, exemplified in the ruins of Asia, Egypt, and Magna Græcia, may now be studied in Chinese architecture, which has remained unchanged from the most remote antiquity. Chinese construction is made up of parts not organically connected. Posts carry the roof and ceiling, the walls are apparently nothing but screens. The Polynesian plaited fence is here developed into a rich ornamental system, namely, the lattice-work which is always found in the Chinese house, &c.

The opinion that India is the cradle of mankind does not agree with the tale told by its architectural remains, which point to a mixed style derived from various sources. When we consult the oldest written documents, such as Ramajana and the Mahabharata, we find that even in these early times Indian art was

most complicated and rich in forms. Wood, brick, stone, metal, and stucco were already all in use, and each of these materials had brought its contingent of special features; but the one which seems to have had the greatest influence on Indian architecture is stucco, for the overloaded ornamentation of Indian monuments is nothing but stucco-work imitated in stone. We read in the Mahavansi a description of the Buddhist convent Lohaprasad in Ceylon, built about 200 years before Christ. It was a brick building supported on stone columns 12 feet high, and parts of the structure were covered with the most precious materials and the richest ornamentation. The columns were decorated with sculptures of lions, tigers, and other beasts, as well as gods. Such is the description. We may see the ruins of this building: most of the 1,600 columns are still standing. They are roughly-hewn blocks of gneis, and one can perceive that they were all covered with a thick layer of stucco, by which these old-fashioned piers obtained the original sculpturesque ornamentation the old records speak of. Semper is induced by this discovery to venture on the very bold hypothesis that the dolmens and Druid cycles of Stonehenge and Brittany were but the kernel of stucco structures. At all events, the use of stucco for basso-relievos is proved to have preceded stone carving in India. When stone relievos superseded the older work they were covered with a thin coating of painted stucco, so that in outward appearance nothing was changed, only the kernel was of more durable material. In the same way modelling in clay is probably derived from stucco, by serving as a kernel to the same. So are mosaics, painting, and metal plating parts of the clothing system which have succeeded to stucco.

Mesopotamia was the land of embroidery tapestry carpets, which, by being exported, carried the native arts of Mesopotamia far away to all known countries, but specially to Greece, where the pictorial subjects and monstrous creatures which adorned these stuffs were the origin of many a Greek fable, and peopled the Hellenic Olympus. Symbols of mystic meaning, such as the volutes of the tree of life, became architectural features. Moreover, borders, seams, fringes, buttons, knots, and other elements of textile work became common types used in decoration. Such was the influence of the arts of Mesopotamia on ancient architecture.

The civilisation of Mesopotamia took its rise near the Persian Gulf, and then followed the banks of the Tigris and the Euphrates. The oldest buildings of that region are probably those of Chaldæa, the remains of which, insufficient for us to reconstitute the originals, yet suffice to show the early development of the clothing principle. In the ruins of Wurka we see the wall covered with  $2\frac{1}{2}$  inches of stucco, and other walls are encased with mosaic, formed of terra-cotta nails 6 inches long,  $\frac{3}{4}$  inch thick, driven into the surface of the clay, which it protects as well as decorates with carpet patterns. The walls where the surface is denuded show layers of reeds projecting like those still used in China for the retaining of the stucco surface.

Mr. GEORGE WALLIS, of the South Kensington Museum, spoke of his connection with Professor Semper, and regretted the premature close of his friend's career. Semper, he said, had little to do with the formation of the Science and Art Department, and still less with the South Kensington Museum, but had had much to do with the incipient institution at Marlborough House, as also in getting together the collection at Gore House, which he made use of in his lectures at Marlborough House. Mr. Wallis referred to the Parliamentary Committee appointed to consider the relations of arts and manufactures, and the agitation in favour of schools of design, museums, &c., since 1836, and how, consequently, Semper, on coming to England, found a small but sympathetic body of men, and among them the late Prince Albert. The movement regarded textile work more than it did architecture. He himself, from the position he occupied, was desirous to inform himself to the utmost in regard of textile design; but, to his surprise, he found Semper's ideas coincided closely with his own, and that a comparison of notes showed that each of them had travelled over much the same ground—Semper as an actual traveller, he himself by the study of books. Owen Jones and other friends who sympathised with Semper's views did not accept them absolutely; and, though some of his theories as to the origin of design were far-fetched, others were well worthy of consideration and study. In conclusion, he said he should like to see a good English translation of Semper's work. The illustrations would be of the greatest use to textile design.

Mr. SLATER said he had for a long time felt that the subject of evolution, not only of architectural ornament, but of artistic forms of all kinds, was a most fascinating one, and one that opened up a wide and interesting field of study to any one who liked to explore it. Some of Semper's conclusions would seem to many of them rather startling. Though it would not become him to dispute conclusions arrived at by Semper after ransacking the world through, it was open to him to point out certain difficulties that seemed to beset their acceptance. He had only had an opportunity of glancing briefly through Semper's work, but out of two or three main points that struck him, one was the importance attached to textile work. In any inquiry into the history of primitive peoples, students agreed that great assistance was derived from study of peoples occupying an analogous position at the present



time—in other words, of savage tribes. This was the opinion of Sir John Lubbock and those others who had given themselves to the study of primitive races. If, then, they wanted to get an idea of primeval art they must do the same. Travellers all told us that savage tribes had a passion for personal adornment; so that Semper was right in making adornment of the person his starting-point. But an hiatus occurred in treating clothing as the starting-point for the ornament; and Semper said he discovered in the tattoo the same marks as on metal work, and that it showed clothing had originated the ornament on the metal work, but the use of clothing would surely spread from cold countries to warm. The contrary was the case as regarded art. The savage would decorate his person before he came to think about clothing. Nature provided him with pigments to adorn his person, and to nature which prompted the elementary lines and curves of his ornament the savage would look for objects to copy. The difficulty of imitating any ornament or natural object would not necessarily prevent a people without education from trying to imitate it. The circle and the curve were suggested to him in seeing the round orb of the moon, the beautiful curved neck of birds, &c. In fact, this theory would account for the marks and ornament on early stone implements, and it would be strange if we found anything different now among savages, and not on the contrary something very similar. Semper, it seemed to him, allowed his theory to run away with him, and they all know what a procrustean thing theory was in such a case, and how facts had to be squeezed through to fit in with the circumstances. Then, again, the idea was originated that metal was used as clothing to a building, because on many of the tombs in Greece stains from metal and marks of nails had been found, showing that metal work had been hung around them. It might be a mistake, he thought, to say that the metal was put there for the purpose of decoration, and nothing else. In early times metal was extremely rare. Homer, speaking of the possessions of distinguished men, described them as consisting not only of gold and silver, but of other metals. These metals were beaten out into weapons, shields, &c. In every part of the world it had been the custom of early times to bury a man's treasures with him, and it was the most natural thing that the ornamental metal work that had been hung up about the house in life should, at death, be hung about the tomb at death. Later on they would be seen there, and no doubt serve as a copy for decorative purposes. With all respect, he would also say that there seemed a difficulty as to the derivation of columnar decoration from metal-work, and Semper appeared to be arguing from the statue to the column. In the time of Pericles, Phidias, the great sculptor, in his two pre-eminent works, the statue of *Athene* in the Acropolis and the statue of *Zeus*, used ivory, not stone. The exquisitely-outlined columns of stone and marble had nothing in them to show they were copied from bronze work. Then, again, could there be a more extraordinary instance of theory running away with a man than when Semper said that the designs of the textile fabrics exported from Mesopotamia originated many of the Olympian deities? Surely it was more to the point that they were the outcome of the lively imagination of the Greek, who as he wandered through his native woods heard the rustling of the trees, and peopled the woods with fauns, &c.; heard the trickling of the water in the stream, and created the nymphs and dryads; who in the dim twilight converted the strange form of some old tree into the likeness of a god, and who was reminded of Diana, the goddess of hunting, by seeing the crescent moon in the sky with the clouds scouring over its face. Columnar architecture was derived, no doubt, from wooden construction, and the origin of ornamental forms could be found without going so far afield as Semper did. A man would cover his house with reeds that projected to throw off the water. The line of the overlap of the eaves would in first instances be irregular, the ends of the reeds falling at haphazard. These would in later cases come to be arranged in order; and in the cases of sticks, reeds, &c., of unequal length, the process of arranging them in order would, by a mathematical law, evolve certain curves, and hence was derived that beautiful form, viz. the ogee. In concluding his remarks, Mr. Slater said that in architecture, as long as men had free scope to work, the different forms became more and more beautiful and varied; but as soon as—for example, in ancient Rome—art got cramped, began to wane, and when they began to copy the works from other sources, art speedily died out. Mr. Slater then proposed a vote of thanks to Mr. Harvey.

Mr. STANNUS said they were much indebted to *The Architect* for a very interesting account of Semper. In the last paragraph the writer said that "Semper first gave out his theory of the art of clothing as the basis of all art about the year 1831. Carlyle, well versed in German affairs, wrote his 'Sartor Resartus' in 1832. Is it not possible that this book is a skit upon our author's ideas, and that the original of Professor Teufelsdröckh is our friend the late Professor Semper?" That, he thought, was exceedingly interesting, and was most likely correct. Questioning whether certain patterns of ornament could have been derived from textile design, Mr. Stannus remarked that a workman who was given different coloured bricks with which to build a wall would be certain to

arrange the bricks so as to form a pattern. Then, again, certain elements were common to all ornament. Circles, spiral lines, &c., were the common property of mankind, and which men made as soon as they began to make anything. These had their origin in many centres; and because they were found to be common to different countries, it did not prove that there had been any trade or intercourse between those countries, or that they copied from each other. If it showed anything, it was this—that there was a natural tendency in the human mind to make ornament. Mr. Stannus incidentally alluded to the origin of the word "frieze," which owed its derivation to the word "phrygionium," which meant a work exceedingly rich in embroidery. He also alluded to a subject which had of late much exercised the minds of Scandinavian archaeologists. The fact was not known in Semper's time, but the form put down as a serpent was really that of a lion—of a depraved lion certainly, not being such careful work as some of the examples of Scandinavian work at South Kensington.

Mr. WILLIAM WHITE, in seconding the vote of thanks, remarked what a "come down" it was to find that what they had looked on as real truth was real sham, because all ornament and architecture came from stucco. That at least appeared to be the outcome of what they had heard.

The CHAIRMAN put the vote to the meeting, and it was carried by acclamation.

Mr. HARVEY, in responding, said he did not intend to try and defend in a few words the views expressed by Semper in his work, a book that would take three months to read. Fifteen months ago he began the book. Like others, he had had his doubts about Semper's theories, and therefore he investigated every theory put forward. The more he did so the more he got sucked into conviction, till he became, as he now was, a believer. That was the best answer he could give, and he thought any who followed his example would end also in believing. When a Commission was sent by the French Government to report on the South Kensington system, M. Guillaume, one of the Commission, requested him to accompany them and act as interpreter, and on that occasion asked whether he could not translate Semper's work into French for the use of the art schools. He (Mr. Harvey) replied that at present he belonged to the school of architecture militant, and that the translation of the work would suit him better when he got too old for active service. He was exceedingly obliged for the thanks of the meeting; but their thanks were really due to Mr. W. H. White, who had found him out. "My advice is," said Mr. Harvey, "if any of you have anything interesting that you keep it to yourselves, or Mr. White will have it out of you."

#### BIRMINGHAM ARCHITECTURAL ASSOCIATION.

THE second ordinary meeting of the current session was held at Queen's College on Tuesday evening last, the vice-president, Mr. W. H. Kendrick, in the chair. The following gentlemen were elected members of the Association:—Mr. F. J. Yates as an honorary member, and Messrs. W. G. Midgeley and G. Payton as ordinary members. Mr. J. King James gave a lecture on "Pediments and Gables," which was illustrated by photographs, and by many of the author's own sketches. A discussion ensued, in which the following members took part:—Messrs. W. Doubleday, Franklin Cross, W. H. Kendrick, and Victor Scruton (honorary secretary). After a hearty vote of thanks had been accorded to the lecturer the meeting terminated.

#### MANCHESTER ARCHITECTURAL ASSOCIATION.

AN ordinary meeting of the Manchester Association was held at the Old Town Hall, King Street, on the evening of Tuesday, December 9, Mr. J. S. Hodgson in the chair.

A paper was read by Mr. R. B. Preston, A.R.I.B.A., on "House Sanitation," in which attention was chiefly directed to the consideration of water and water supply. The various sources and methods by which water is usually obtained for the supply of towns were enumerated, and its different chemical properties pointed out. The absorption of gases by water was shown to be a very important property in reference to sanitary inquiries, and one which should not be lost sight of in planning drains, as this fact renders all so-called traps practically useless against the entry of sewer gas. The opinion of Dr. Frankland was quoted in reference to the contamination of water by organic matter, viz., that the danger resulting from the use of such water did not arise from the decomposition of organic matter, but from the risk lest some of it had escaped decomposition.

In the discussion which followed, Mr. F. R. Hawxby mentioned a few of the inconveniences arising from the use of well-water obtained from the red sandstone, which contained a large proportion of lime and magnesia in solution. He also proposed a vote of thanks to Mr. Preston for his paper, which was seconded by Mr. T. Chadwick, A.R.I.B.A. The meeting was also addressed by Messrs. Hodgson, Mould, Woodhouse, and Worthington.



## EDINBURGH ARCHITECTURAL ASSOCIATION.

A MEETING of this Association was held in the Professional Hall, 20 George Street, on Monday, Mr. G. Washington Browne, the president, in the chair. A paper on "Architecture from a Layman's Point of View" was read by Mr. Patrick Geddes. After referring to the causes of the comparative modern indifference to architecture, and seeking to express the various views held by the more sympathetic portions of the public, the lecturer pointed out the close parallelism of methods and results among students of all departments of historical inquiry, of architecture or archaeology, philology or economics alike, as well as with those of the natural sciences, showing that although their progress had in all cases involved minute and laborious special researches, their broad general results were henceforth accessible to all reasonably educated men. The special evolutions of architectural forms (as of obelisk and pyramid from standing stone and cairn) was also discussed in relation to other historic movements of thought and action. The justification of architectural magnificence was likewise outlined, especially on the grounds afforded by the science of economics and of education. The lecturer concluded by defining some of the leading social conditions (economic, political, and moral) under which any school of architecture had to labour, and on which its survival and progress depended. At the close of a discussion which followed the reading of the paper a vote of thanks was accorded to Mr. Geddes.

## LEEDS AND YORKSHIRE ARCHITECTURAL SOCIETY.

THE annual dinner of the Leeds and Yorkshire Architectural Society was held on Monday evening at the Great Northern Hotel. The company numbered about seventy. Mr. Birchall, F.R.I.B.A., president of the society, took the chair. After the customary loyal toasts, the chairman proposed "The Leeds and Yorkshire Architectural Society." He was glad to say that the society was in a flourishing condition, and that it was doing its duty in the town. He asked those gentlemen who were patrons of art to do something towards the preservation of Kirkstall Abbey, as, unless something was done, that structure would soon disappear.

Mr. G. B. Bulmer, the hon. secretary, who replied, said that so long as the society existed the president and officers would endeavour to maintain it in an efficient state. When he first joined the architectural profession, fifteen years ago, it struck him that architects were on anything but friendly terms with one another, but by means of this society they were gradually making an alteration in that respect. The society endeavoured to cultivate and maintain a proper state of feeling among the members in Leeds. It was divided into three classes—honorary members, associates, and members; and by mutual assistance they were able to carry on a good work. They were greatly indebted to the honorary members for their support, because they had nothing to give them in return; and these gentlemen could have but one desire, to promote good architecture in the town, and to form a connecting link between the profession and the public. The members were banded together in order to maintain their professional position, and to uphold the standard of professional integrity. The associates were students, young architects, and others, who were desirous of improving themselves in the vocation to which they had been called. It was to be hoped that, in the course of time, the society would tend to elevate architecture in Leeds, and to improve the work which came from the design of the architect.

Mr. J. W. Cannon proposed "The Royal Institute of British Architects and Kindred Societies." He said that for many years past he had taken an interest in architectural societies, and in the Royal Institute of British Architects in particular. He had the greatest possible faith in the value of the work which societies of this kind did in promoting good fellowship among their members, in improving the standard of the general morality of the members, and of doing good to the general public. Architectural societies had not been formed merely from selfish motives, and he was sorry to say that architects in this country showed considerable apathy with regard to the assistance they might gain by mutual combination. The Royal Institute, to which they looked as the centre of their body, was to a very great extent isolated from the general bulk of the architects of the country. The Institute, he was sorry to say, studiously ignored the just claims of country architects, and gave them no means of bringing their opinions and views before the general public. Some scheme ought to be feasible for amalgamating the provincial societies with the Institute, which would make that body thoroughly representative of national architecture. Provincial societies did good work in several ways, but those ways were distinct and separate, and did not always tend in the same direction. It was to the Institute that they had always looked for reform, and to it they still looked. If they now looked with more impatience, it was with more hope, because they had present as its President one whom they all delighted to honour. He was a gentleman who for the first time in the history of the

Institute had recognised the claims of country architects, a gentleman who was no partisan of school, party, or section, one who asked not what was politic or expedient, but what was right or wrong. They, therefore, looked to his year of office to be a period of useful and beneficial changes.

Mr. Ewan Christian responded. He agreed with a great deal Mr. Cannon had said, but it depended upon the action of the individual architect whether his profession was respected or not. Each man ought to consider that the honour of the profession at large was entrusted to his own hands. He hoped that the changes Mr. Cannon had suggested would soon be brought about. He felt very strongly on the question of the country members, and their right to have a vote in the affairs of the Institute.

Mr. Holden, Mr. Dunn, and Mr. Jackson also responded. Dr. Gott proposed the toast of "Literature and Art," which was responded to by Mr. Statham and Mr. C. Pebody. Mr. J. Tweedale, A.R.I.B.A., proposed "Law and Medicine," to which Lieut.-Colonel Hartley and Mr. A. M. Robson replied.

In proposing the toast of "Commerce," Mr. John Hepper said that trade in Leeds had been on the whole better, more general, and steadier than in any other town. Although the profits made by individual manufacturers had not been so large as formerly, yet the working classes had had regular employment.

Mr. J. Barran, jun., who responded, agreed with what Mr. Hepper had stated.

## THE FITTINGS IN THE LAW COURTS.

A FEW days ago Mr. Higgins, Q.C., in Mr. Justice Pearson's Court, complained of the inconvenient arrangements for books and papers of counsel, especially the Queen's counsel, and the general bad arrangements of the seats, and asked his lordship whether he could not make some representation to the authorities on the subject.

Mr. Justice Pearson: The arrangements are not less inconvenient for the judge. My present seat is 4 feet 4 inches above the floor. In the old hall of Lincoln's Inn, which was about the best court we have ever had, the dais was 2 feet 2 inches above the floor. The seats of my clerk and the registrar are 2 feet 8 inches below me. I cannot see my clerk—I presume he is here—and I can just see the top of the wig of the registrar, and the inconvenience of communicating with them is exceedingly great. In the next place, in order to address the Bar, and make myself audible to them, I have to stoop forward in a constrained position. If I sit in my place naturally my voice goes up and is lost in space above. I wish some friend powerful enough to induce the authorities to alter the fittings of this court so as to be reasonably convenient, both for the judge and for counsel, would exert himself. To my mind the arrangements of this court are as inconvenient as they well can be.

Mr. Higgins: There is no place, when there is anything like a heavy brief, even to put one's eye-glasses, much less space for books. The desk is narrow; there are no drawers.

Mr. Justice Pearson: In the old hall of Lincoln's Inn the desk or table was 2 feet wide; the desks here when pulled out are only 17 inches. I wish the Bar would represent the matter to the authorities. I am sorry to say that any representation of mine would be unlikely to have any avail.

Mr. Higgins: The fittings are most expensive and inconvenient. One half the money might have been spent and twice the convenience provided. A plain wide table would have been more convenient than these movable narrow desks now in front of us.

## BOLTON MASTER BUILDERS' ASSOCIATION.

THE seventh annual dinner of the Bolton Master Builders' Association took place at the Swan Hotel on the 11th inst. The president of the society (Mr. John Smith) said he was sorry there was not a larger attendance, but hoped that trade would revive all round so that when their annual gathering came round again they might be in a better position. There were members who were absent through ill-health, and he sincerely hoped they would soon recover.

The usual loyal toasts were proposed.

Mr. John Ratcliffe proposed "The Army, Navy, and Auxiliary Forces." Mr. Ratcliffe proposed "The Mayor and Corporation of Bolton," which was responded to by Mr. J. J. Bradshaw.

Mr. W. Coope, of Farnworth, proposed "The National Association of Master Builders of Great Britain," saying that the association was one not only of importance but of great use. He was sorry to hear of the falling-off in the number of their members, because he felt the time would come when the necessity of unity would be felt amongst them. They ought all to work together and endeavour by standing shoulder to shoulder to better their position.

Mr. G. H. Marsden, replying to the toast, gave an account of the work done during the year by the National Association. He referred to the effort by Mr. Burt to secure more onerous restrictions through the Employers' Liability Act, pointing out that the



alterations would have been unjust, and that they had been successfully opposed. The association had done a great amount of good during the seven years in which it had been established, and he contended that it deserved the support of all the local associations. It behoved all the associations and all the members of those associations to be united together, so as to be ready for any struggle which might come. Locally they wanted builders of all grades to join them, they wanted merely personal feelings to be sunk, so that, working altogether, they might improve their status and their general position.

Mr. Marsden proposed "The Bolton Master Builders' Association."

This having been acknowledged, the chairman briefly responded. He said there were about forty members at present, which was a less number than formerly. Some gave one reason for the falling off and some another, but his opinion was that the falling off was due to the fact that everything had been in a settled state. When there was no question between the employers and the employes it seemed that the members of the association ceased to attend its meetings. Of course there was other and very important business. Questions arose between architects and builders which might very well be gone into by the association if the members would bring them before the committee. Since that association had been formed they had found that all questions between employers and employes could be settled without strikes. That was a very good thing, because strikes caused a complete waste of time, time which could never be recovered; and if for no other reason than that it prevented strikes and lock-outs, he thought the Master Builders' Association was worth backing up and supporting.

Mr. W. Townson proposed "Our Guests," which was responded to by Mr. Ashcroft, of Wigan. The toast of "The Architects of Bolton" was responded to by Mr. Pilling (of the firm of Messrs. Cunliffe & Pilling) and Mr. J. J. Bradshaw. The toasts of "The Officers of the Association" and the "Town and Trade of Bolton" were also drunk.

#### CHURCH BUILDING IN NORTHAMPTON.

THE following report was read at the annual meeting of the Architectural Society of the Archdeaconry of Northampton, which was held last week:—The cases of church building and restoration brought before your committee in the past year have been unusually few. But churches needing substantial repairs in the archdeaconries are now, happily, rare, and where such do occur the cause may fairly be ascribed to lack of means rather than to lack of zeal on the part of those concerned. That nothing has yet been done at Irthlingborough is probably due to the extreme difficulty of raising in a poor parish the large sum which must be spent upon the tower. This has been pronounced by Mr. Pearson, R.A., by Mr. Peacock, the architect who restored the nave, by your committee, and by a committee of the Society for the Protection of Ancient Buildings, to be in a very dangerous condition, and ought to be taken down and rebuilt wholly or in part, or repaired at a cost equivalent to rebuilding. While sympathising with the parish authorities in the hard task which lies before them, your committee cannot but think the raising money for, and placing an organ in the newly-restored church, an act of very doubtful propriety under existing circumstances, when the fall of the tower and lantern might wreck church and organ at any moment, and once more your committee venture to press upon the authorities at Irthlingborough, the absolute necessity of taking immediate steps for securing the safety of both church and tower. In the case of Earls Barton action has been taken. The parochial committee there obtained the opinion of Mr. Pearson, R.A., on the state of their tower. He takes a more favourable view than Mr. Carpenter (who deemed underpinning and other expensive works necessary), and recommends only repairs which will cost comparatively little. These are now being carried out by the parochial committee, and it remains to be seen whether the bells can be rehung and used with safety in the structure, which is well known is very seriously fractured. The following plans have been laid before your committee during the year:—Nassington Church: Rev. D. W. Barrett, vicar; Mr. Traylen, architect. Church consists of nave, chancel, aisles, tower, and spire. The spire, a fine example of Decorated work, crocketed. The body of church shows various dates up to Norman times. At present it is only proposed to repair and point external and internal stonework, to repair aisles with local stone, and to reseal throughout in oak, copying the old bench ends. It was recommended that the backs showed to be slightly inclined should be made vertical, and the bookboard lowered.—St. Mary, Far Cotton: Rev. C. J. Gordon, vicar; Mr. Holding, architect. This is a new church, Early English, consisting of nave, north and south aisles, and chancel, terminating with semicircular apse, north and south porch, opposite westernmost bay of nave. It is proposed to vault with Bath stone the chancel, nave, and aisles. The committee objected to this, also to the small tower and spire proposed at east end of north aisle, and suggested in preference a flèche or bell-turret, and to defer erection of tower until funds were

obtainable for a larger one, which they suggested might be placed advantageously at the west end on the site of the north or south porch.—Moulton Church: Rev. O. R. Walker, vicar; Mr. E. Law, architect. This fine and well-known church was visited by a sub-committee to advise with reference to its thorough restoration. Although the plans of the architect were generally approved, your sub-committee recommended that as the money in hand was a small amount, the underpinning and general repair of the tower should be at once taken in hand, leaving the question of rebuilding a large portion of the north arcade, which seemed to be in very bad condition, for further consideration and examination. The committee preferred to follow the original design of the old nave roof rather than adopt a new design, and to retain the old paving and levels as far as practicable. A large sum must necessarily be raised even for the general repairs of so large a building; amongst these the pointing of all the external work requires immediate attention.—Staverton Church: Rev. H. B. Hodgson, vicar; Mr. Townsend, of Peterborough, architect. An interesting church consisting of nave, north aisle, chancel, and western tower, with an elegant arcade of seven bays of the Middle Pointed period. At present it is proposed to repair the roof, to reseal the area, and to remove the surrounding soil and effectually to drain the building. The details of the seats were objected to by your committee, and upright backs and square plain bench ends recommended. A sub-committee of the society was invited by the vicar (the Rev. J. P. Carey) to visit the church of Rothersthorpe, to advise how a few pounds could be best spent on it. They made a report in writing to the vicar and churchwardens. A curious head of cross, which has been preserved by the churchwarden, has been by him placed in the church. Other works have been done in various parts of the diocese, which have not been brought before the society. What is virtually a new church has been erected at Silverstone, under the direction of Mr. St. Aubyn, architect. An enlargement and other alterations have been made at Sulgrave Church, under the same architect. One of our members measured and made notes of the church before the alterations. With reference to "The Queen's Cross," the committee which was formed last year report that 320*l.* will be required for its repair, which sum includes the renewal of nearly half of the flight of steps up to the Cross, the levelling of the ground around it, and the careful restoration of the mutilated and decayed portions of the superstructure. The broken pedestal at the summit will be left as it is. The committee having only received up to the present time promises to the extent of one-third of the sum required, will be very grateful for further contributions, however small, to enable them to commence a work which is necessary, mainly for the preservation from ruin of a memorial of very great historical and architectural interest. It has been proposed, and considered desirable by your committee, that a record of church plate should be made in the Peterborough diocese, and the necessary steps for carrying out the plan is under the consideration of a sub-committee.

#### BELLHANGING.

A MEETING of the Architectural Section of the Glasgow Philosophical Society was held in the rooms of the Institute, Bath Street, on Monday, Mr. James Sellars in the chair. Mr. James A. Walker read an exhaustive paper on "Bellhanging" as applied to dwelling-houses and offices, and explained the mechanical, pneumatic, and electric systems of hanging bells. In the course of his address he said the rapid advances which had been made, and were still being made, in electricity brought quite a large number of appliances to bear on the subject of electric bells. They were, however, far behind their Continental and English neighbours in the general introduction of electric bells; but it was questionable if these would have been so fully developed had the mechanical system been carried out by them with the same thoroughness in which it had been done in Scotland, and for which thoroughness Scotland stood pre-eminent in regard to many branches of the trade. After explaining the different systems, he said, taking all things into consideration, the mechanical bell still held an equal, and, he believed, a superior, position to either of the others. It had the advantage of being distinguishable by sound, it did not require periodical attention as in the case of electric bells, and for good household work was therefore more convenient. Pneumatic bells, on the other hand, were invaluable in the case of single-call bells, while electric bells were pre-eminent in adaptability, as they could be used in every form and under all circumstances. There was nothing neater or more compact than the electric indicator, and electric bells were undoubtedly best for large hotels or public offices, where quietness was to be maintained and where numbers of signals had to be collected into small space. While it was difficult to give the comparative prices of the three systems, as what would be found cheapest under one system would, under slightly different circumstances, prove much more costly, he thought, all over, the mechanical bell was from five to ten per cent. cheaper than the pneumatic or electric. In noticing the various adaptations of bellhanging, he mentioned that bells could



be made to act as burglar-alarms, aid in the detection of crime, act as fire-alarms, &c. He referred, in conclusion, to ecclesiastical bells, and in that connection said it was a great mistake to suppose, as many did, that bell music every hour, quarter-hour, or even at the half-quarters, was an interruption. Any one who had heard the musical chimes of Belgium would hold a contrary opinion. Belgian founders were still far ahead of them, and excelled in beauty of workmanship, although it did not always follow that the finest-looking bell gave the best sound. It was, however, to be hoped that the day would come when their own country would hear the carillons ring as sweetly as did those over the Low Countries. Mr. Walker, in the course of his paper, gave illustrations of the working of a number of ingenious bells by the three methods. A short discussion followed. Mr. Walker was afterwards thanked for his paper, and a vote of thanks being awarded the chairman, the meeting separated.

## THE BUILDING TRADE IN EDINBURGH.

THE building trade of Edinburgh during the year which is about to close has passed, says the *Glasgow Herald*, through a period of continuous depression. Builders at the beginning of the year had hopes of more prosperous times, but as the season advanced they found no improvement. Ever since the failure of the City of Glasgow Bank the trade has been in a depressed state, from which it seems disinclined to recover. Prior to that unfortunate event builders and their employes were enjoying great prosperity. Several extensive areas of ground in healthy suburban localities had been thrown open, and the feus were taken up with remarkable speed. Large tenements were quickly built and as quickly for a time were tenants or owners found for them. Prices were highly satisfactory both to the employer and the employed. Houses which cannot now bring more than 400% were then sold readily at 500% or 550%. Workmen in several trades received as much as 1s. per hour for their labour, and had often overtime when houses were near completion. The inevitable result of this high pressure was a reaction, which would have occurred without any bank failure, although perhaps not so soon. Had builders taken advantage of the warning which the bank failure offered in time and put a check upon their operations they would have been better employed during these subsequent years. The majority, however, continued their extensive work, and the result was over-production. What gave them some encouragement at the time was a very general tendency towards residence in these newly-opened suburban localities in preference to the north side of the city. Since 1880 there has been very little variation in the state of the trade. This fact is brought out by the returns of the Dean of Guild Court. In the official year 1880-81 warrants were granted for 102 self-contained houses and 113 tenements; in 1881-82 the figures were 82 self-contained houses and 72 tenements; in 1882-83 they were 60 self-contained houses and 65 tenements; and in 1883-84 they were 114 self-contained houses and 87 tenements. The returns of the Court prior to 1880 are of no value for comparison, because it was only in 1879 that the city boundary was extended so as to include the suburban localities, where the great bulk of the building was going on. A noticeable feature of this year's work has been the erection of an increased number of self-contained houses. These houses for the most part have been built in the valley on the south side of the city, which runs along from Craiglockhart Hill to the Dalkeith Road. It is through this valley that the newly-opened Suburban Railway passes. While a considerable number of houses are detached, and are surrounded by gardens, many of them are built together in a continuous row. In several instances the old English style of architecture, with its small windows and broken gables, has been adopted, giving to some of the little districts or groups of houses a very quaint, old-fashioned character. On an average these newly-built self-contained houses have been well let, although many of them are still without occupants. Now that the Suburban Railway is in operation, and Blackford Hill is about to be thrown open to the public, it is expected that a demand for property in this locality will be excited. The trade in tenements this year all over the city has been exceptionally dull. There has been almost no speculation by those outside the trade, while builders have engaged in it very moderately. One firm who during the past six or seven years have been building at the rate of half a dozen tenements each year, were content with two this year; while many others have confined themselves to jobbing work or small contracts. In Warrender Park, which in a sense has been the centre of the tenement trade for several years, there has been little or nothing done. There are vacant feus all over the park, but no one seems inclined to build on them, at any rate just now. At Morningside some little activity has prevailed towards the close of the year. At present six tenements are being finished there. A striking contrast to this is to be found at Merchiston, where a large piece of ground, formerly used as the cricket and football field for Merchiston Castle School, was laid out for streets and crescents. A start was made with the building two or three years ago, and some progress was made, but now there is a com-

plete standstill. Nearer Bruntsfield Links is a piece of ground on which Messrs. Beattie are building perhaps the best class of tenements in Edinburgh. The front elevation is quite of an ornate character, while the houses themselves are all large and well finished. In the present state of the market, however, it is doubtful whether they will command the price they deserve. There has been some tenement building also in the neighbourhood of Parson's Green and Leith Walk, but nowhere has there been any great activity.

Looking at the building trade from the workman's point of view, there is to be seen the same depression on every hand. Wages during the year have averaged from 6½d. to 7d. per hour, which means less than 30s. per week. Work, too, has been very scarce. In Edinburgh, during the last fifteen or twenty years, there has always been going on some "big job" in the shape of a public work or large institution which afforded employment to a large number of workmen of different trades. There were the new Post Office, Fettes College, the Museum of Science and Art, the Bank of Scotland, the Royal Infirmary, the new University Buildings, and the like, all of which took several years for their erection. This year the only work of that kind has been the reconstruction of Calton Gaol. The employment of labour there, too, has been restricted, through the work having to be done in portions at a time. There were hopes that the Government would proceed with the completion of the Museum after they had included the grant in their budget, but no movement has yet taken place in the matter. Next year will be fortunate in having the erection of buildings for the National Portrait Gallery. Another reason for the scarcity of work, apart from the general depressed state of trade, is to be found in the fact that during the year there have been virtually no new public schools built. In this connection there is hope for the future. The School Board for some time have felt the need of more school accommodation, and at present are on the outlook for sites in more than one locality. Setting aside future prospects, and speaking only of the past year, it must be said that workmen in the building trade have had a pretty hard time of it. According to the testimony of a good authority a large number of men during the year have left their trade, not to emigrate, but to act as cabmen, railway porters, tramway car drivers and conductors, and the like. The same authority is of opinion that very few men have emigrated. During the summer months there was the usual stream of strangers into the city, but in only one or two instances did they obtain employment for any lengthened period. Masons early in the year were pretty well employed, and the same might be said of joiners. The latter, along with plumbers, had a good deal of work in improving houses on the north side of the city. Since these houses were built sanitary science has made considerable strides, and new systems of ventilation and heating have been applied in the erection of new houses. The proprietors of the older houses in order to keep abreast with the times and find a market for their property have been busy introducing these new systems. In this way plumbers especially have found a good number of odd jobs. Plasterers, on the other hand, have been very dull throughout the whole year.

## A RAILWAY CONTRACT DISPUTE.

THE award of Mr. G. M. Cunningham, C.E., has been given in the case between the Cathcart District Railway Company and Messrs. Coghill & Co., which was heard before him as arbitrator. The line was to be an addition to the railway system of Glasgow, and the contract provided that the company should give the contractors the land necessary for the construction of the works within two months after the date of the contract, unless they were prevented from so doing by delays connected with the proceedings necessary to acquire the ground, and other such causes, in which event the contractors were to have an extension of time to complete the contract, but were not entitled to rescind it. The company refused to give the contractors more ground than they thought necessary, on which the contractors abandoned the works, and raised an action for the price of the work done, and for damages for breach of contract. The case was remitted to Mr. Cunningham, and both parties lodged claims. The contractors claimed the price of their work as executed, and the plant taken possession of by the company, besides damages; while the company claimed over 40,000%, as the difference between the contractors' price and that at which the contract was re-let, the cost of taking down walls said to be defective, &c. Mr. Cunningham finds that the company's failure to give the ground did not arise from any of the specified causes; but it seriously hindered, if it did not render impossible, the proper execution of the works; and that it therefore constituted a breach of contract which entitled the contractors to abandon the works. He therefore finds Messrs. Coghill & Co. entitled to payment of 17,194% for work done and plant taken over, with 100% for breach of contract; but under the deduction of 275% as the cost of repairing some properties adjoining the line, which were injured during the construction of the works, and of the payments made to account. The company's claims are otherwise set aside, and they are found liable in the costs of the arbitration.



## STONE-QUARRYING IN CHINA.

AN interesting report on the products of the Ichang consular district in Central China has been prepared by Mr. Charles Gardner, who has been a resident for over twenty years. He says that all over that part of the country there are large and small lime-kilns. Lime-stone is much used for foundations of houses and walls. At the quarries at Ho-ai-tze, some eighteen miles above Ichang, on the Yang-tze, over one hundred men are employed. The quarry-men have an agent in Ichang, and will sell the stone either at the quarries or in Ichang. At quarries the stone is  $2\frac{1}{2}d.$  the square foot, delivered at Ichang,  $3d.$  The quarry-men can guarantee to supply 2,000 feet a month, in addition to what they supply to their regular customers. The stone is rough-hewn, but they will supply masons to smooth the stone at  $9d.$  per day per man. The hill belongs to a family named Hsu, to whom the quarry-men pay an annual royalty of  $17\frac{1}{2}l.$  10s. for the right of quarrying. The stone is mountain limestone, of a dark grey colour, with occasional layers of partly crystallised stone. The men declare that fossils are never found there. The stone when cut is sent down a mud shoot to the water's edge on wooden slides. When the shoot is not steep enough for the stone to slide of itself, the stone-cutter drags it by a rope round one shoulder; to the rope is attached an iron hook, and the hook is hooked to an iron staple fastened to the slide. The man's breast is protected from the cutting of the rope by a padded waistcoat. Accidents from the stones shooting off the slides and striking the quarrymen are of frequent occurrence. In the quarries at Kwang-mên-Shan, on the Ching river, over 500 men are employed in five associated gangs. The stone is red and blue mountain limestone, and is largely exported in native boats to Hankow, Wu-chang, Yochow, Chang-sha, &c. The stonecutters pay a royalty to the owners of the hill, and the output then belongs to the quarrymen. The five associated gangs have elected a head man, who divides the earnings, and to whom all the workmen have to pay implicit obedience. All the stone cut is sold to a guild of traders, to whom the ordinary purchaser has to apply; after he has bought his stone he has to apply to another guild, which has the monopoly of transporting it from the quarries to Itu, Hankow, or wherever else it may be required to be sent. In some places, the water trickling over limestone covers stalks and leaves of plants with a thick coating of lime, and forms stones of curious shape, which are cut out and planted with ferns, ceneraria, &c. About  $350l.$  worth of these rockeries are sent every year by the steamer to Hankow. As they do not pay duty, they do not appear in the Customs Returns.

Shaly slate is found running for miles under the red clay, and white limestone of the coal-producing hills. A solid slate is found at the top of the white limestone cliffs of the Ichang Gorge; at this spot many of the houses of the natives are roofed with slate. There used to be quarries in the caves near for obtaining slate to make native ink palettes, but they have been recently closed for fear of the roofs of the caves giving way. Granite and syenite exist about 20 miles up the river at Nanto, where they are chipped into mill stones, mortars, cattle troughs, &c.

There is a trade in fossils. The orthoceras found in slate at Nanchich-ah, about 40 miles north-east of Consulate, is cut, and is either framed as a picture or made into ornamental furniture. The same holds good of the ammonites, which are called Kosmos stones, from their resemblance when polished to the Chinese symbol for Kosmos. No duty is yet charged on the export of these fossils. They do not, therefore, appear in the trade returns. The tools used by the fossil-cutters are a saw and chisel; they prod about the slate until they find an orthoceras which they think will be perfect; they then cut out a slab, which they saw into two or three thin planks, so that the orthoceras looks like a white picture of a pagoda on a black ground. The orthoceras fossil is most common in the neighbourhood of Nanchich-ah, but other fossils, such as ammonites, also exist in great numbers. There are also fossil bivalves, called by the Chinese "stone swallows." The natives believe that these fossils fly about underground in the same way as the swallow flies in the air. The fossils being so close together, in a region at least thirty miles long, is remarkable. There is hardly a cubic foot of limey slate which does not contain a fossil or fragment of one. Mr. Gardner also came across agates, syenite, and a very peculiar formation of red sandstone, which lay upon the mountains like tessellated pavement, each piece of sandstone being diamond-shaped, and about four inches across.

The Kwan-yin-Shan Mount has several coal shafts in it. They are nearly horizontal, 3 feet high, 5 feet wide, and are supported by log stanchions. They are provided with wooden boxes on slides to raise coal to pit's mouth. The depth of the shafts is about 200 yards. The coal is in very thin seams, from 1 to 6 inches, very gaseous, but dirty and friable. About six men work in each shaft. Each man can, if he works his best, turn out  $1\frac{1}{4}$  tons a day. The price of the coal at the pit's mouth was about  $2s. 6d.$  a ton. The Kwan-yin hill belongs to the Liu family, which charges a royalty of about  $7\frac{1}{2}l.$  for each shaft. This royalty once paid, the output belongs to the miners. There are never more than one hundred men working at once on the hill, and generally much fewer. The output is rarely more than 80 tons a day; taking the whole year round, it is not much more than 25 tons a day.

The miners have no dread of fire-damp, nor have any of the shafts been rendered unworkable by water. Coal, however, has not been long discovered here, so that none of the shafts are very deep. The lamp the miners carry is made of copper; it is unprotected. A rough chisel for picking out the coal is the only other tool used. On the whole road to the mines the formation of the hills was shaly slate below, then mountain limestone, then red clay, then white limestone. The shafts of the mines were cut in the white limestone. The coal is carried from the pits to Mosze, a distance of twelve miles by nearest road, by baggage mules. The price of the coal at Mosze is about  $12s. 6d.$  per ton.



## The Dome of St. Paul's.

SIR,—As the "one full-fledged Academician" who took part in the discussion on the decoration of the dome of St. Paul's, to whom Mr. Lewis F. Day refers in your last number, may I be allowed to protest against having words put into my mouth which I never uttered. The only words I did use in connection with Stevens's design were correctly given in the "Report of the Proceedings." They are as follows:—"I earnestly hope that before the mode of decoration of the dome is finally and irrevocably settled, the incubus of Mr. Stevens's design may have ceased to overcome the minds of those who have to decide. I recognise great cleverness and wonderful imitative faculties in the design in question, but I am convinced that any arrangement founded on it will prove impracticable and eminently unjust to the artists who may be commissioned to carry it out." Mr. Day makes me "express a hope that the objectionable design might be removed to the obscurity from whence it came," &c. &c.

The *Architect* is so much read that I think I ought to be allowed to state that I never expressed a hope of this kind, nor did I say anything which could be twisted into any approach to it. The phrase is a pure invention on Mr. Day's part. I simply expressed an opinion that Mr. Stevens's design, or any modification of it, would be practically unsuited to the decoration of the dome, and to this opinion I adhere.

In party warfare (to which low level Mr. Day would degrade the discussion) it is I suppose justifiable to abuse one's opponents, but hardly to misquote their words. Such tactics invariably recoil on the heads of those who use them.

I remain, your obedient servant,

3 Hall Road, St. John's Wood:

E. ARMITAGE.

December 15, 1884.

## CHURCH BUILDING AND RESTORATION.

**Emmanuel Church, Holloway.**—On Saturday last, the 13th inst., the new Church of Emmanuel, Hornsey Road, Holloway, was consecrated by the Bishop of London. The church holds nearly 1,000 worshippers. On plan, the building consists of nave and chancel, north and south aisles, baptistery, and vestries for clergy and choir. The style of architecture adopted is First Pointed, carried out almost entirely in red brick, no stone being used externally except for the ornamental niche on the entrance elevation, which is executed in red Corsehill stone. Internally, Bath stone is employed for shafts, caps, bases, corbels, and the chancel arch; the remaining arches, labels, and string-courses being entirely of moulded red bricks made to the architects' full-size details by Mr. James Brown. The works have been carried out by the builders, Messrs. Taylor & Grist, of Aylesbury, from the designs of the joint architects, Mr. Frederic R. Farrow and Mr. E. Swinfen Harris, F.R.I.B.A., of 32 Craven Street, Strand, W.C. The whole of the footways of the church are laid with marble mosaic by Messrs. Diespeker & Co. The wrought-iron hinges, finials, railings, and gas fittings have been executed by Messrs. Shrivell and Mr. W. Downing. The heating is effected by high-pressure hot-water pipes supplied by Mr. R. Renton Gibbs, and a system of ventilation has been devised by the architects on the natural means of temperature-difference and assisted by one of Boyle's extractors. The acoustics of the church are based upon some recent investigations in a new direction by Mr. Farrow, and are very successful, it being found easier to read, speak, and sing in the new building than in the temporary iron church holding only 300.

**Govan, Glasgow.**—The foundation-stone of the new Govan parish church was laid on Saturday the 6th inst. by Mrs. John Elder. The new church consists of a vestibule, over which is a gallery; then a great nave, with narrow side aisles used only as passages. A transept on one side; a choir with side aisles, one of which is for the organ; a hall or chapel capable of holding 250 people, and a tower and spire on the north side, isolated from the church, but connected with it by a corridor. Advantage is taken of a fall in the ground to provide vestries, session-house, and



beadle's apartments under the choir. The bulk of the congregation will be seated in the nave, the remainder in the transept and choir aisle. The nave is 98 feet long and 41 feet broad, and the aisles are 5 feet wide. The choir is 30 feet long and 22 feet broad. The hall is 40 feet long and 20 feet broad. The total height of the tower and spire is 258 feet, and the width at the base is 35 feet. The architecture is of an Early Gothic. All the internal features are formed with dressed stone, and it is proposed to line all the intermediate spaces with brick. The roofs throughout are timber, covered outside with green slate and red ridges. The cost of the new church will be 17,000*l.*, but this does not include the tower and spire. The contractors are:—Mason and joiner work, Messrs. J. & D. Meikle, Ayr; slater work, Mr. A. D. McKay, Glasgow; plumber work, Mr. John McFeat, Govan; plaster work, Mr. R. A. McGilvray, Glasgow; gas-fitting, Messrs. R. M. Easdale & Co., Glasgow; measurer, Mr. W. H. Dinsmore, Bath Street, Glasgow; and clerk of works, Mr. George Kermack, Glasgow. Dr. R. Rowand Anderson, of Edinburgh, is the architect.

**Bridlington Quay.**—On Wednesday a new parish room in connection with Christ Church, Bridlington Quay, was opened by a sale of work. The buildings are in the Early English style, from designs by Mr. J. Earnshaw, architect. The large room is heated by a Gurney stove, and ventilated by Boyle's exhaust ventilator. The whole of the works have been carried out by Mr. Thos. Gray, at a cost of 550*l.*

### SCHOOL BUILDINGS.

**Stillington.**—New Sunday schools have been opened. Plans for the enlargement of the Church schools were early in the year prepared by Mr. J. W. Alexander, architect, of Middlesbrough, which showed a new wing 30 feet by 22 feet, and a class-room, kitchen, and places for the storage of surplus furniture, &c. The work has been carried out as a memorial to the late Rev. W. Cassidi, vicar of Grindon, founder of the parish of Stillington.

**Berry Brow.**—The memorial-stones of a Methodist chapel have been laid. The building will consist of two storeys, on the lower of which will be a number of class-rooms, providing accommodation for 80 or 90 scholars, and a preaching-room for 110 persons; and on the upper one will be the chapel, which will accommodate 600 persons. The architect is Mr. J. H. Burton, Ashton-under-Lyne. The amount of the contract is about 2,700*l.*

**Leeds.**—Wesleyan Sunday schools erected at Roundhay have been opened. The buildings are of stone, and designed to harmonise with the chapel. They have been erected by Mr. G. B. Thain, contractor, Wetherby, from the designs of Mr. G. F. Danby, architect, of Leeds.

### ARCHÆOLOGY.

**Discovery of a Roman Dwelling.**—Explorations in a field near Purwell Mill, Hitchin, Herts, have brought to light extensive remains of a Roman dwelling. Its existence has long been suspected, numerous Roman coins, broken bricks, and pottery having at various times been turned up by the plough. A room, with a tessellated pavement in a fair state of preservation, has been opened to view. The walls of the dwelling were built chiefly of large flints. The flints had been roughly squared, and presented somewhat the appearance of large bricks. The dwelling originally consisted of several rooms, as the foundations clearly showed, and in one place there had evidently been a hypocaust or furnace for heating the house with hot air. Several of the peculiar tiles used to form the oblong flues were found scattered about. The tessellated pavement is in red and white, chiefly of the former colour, and the *tesserae* or squares are rather large and coarse. From this fact and the size of the rooms it is inferred that the dwelling was a farmhouse rather than a villa. Several coins of the time of Constantine II., Emperor of Gaul and Britain, and of Magnentius, were found, struck probably about A.D. 340. A great quantity of broken pottery has been turned up, and a small piece of a glass urn. Large ridge-tiles were used for the roof, and many of these lie just as they fell 1,500 years ago. A lane, which in Roman times probably connected this district with ancient Verulamium (St. Albans), runs close by the dwelling, which appears to front it. Numerous cinerary urns and articles of Samian ware have been dug up in the neighbourhood of Hitchin, but this is the first instance of a Roman dwelling-place being found in the locality.

**The Ancient House, Stratford-on-Avon.**—This remarkable house in High Street, which is one of the few buildings in Stratford that remains in precisely the same state as in the days of Shakespeare, has lately shown signs of giving way. The handsomely-carved gable front, which bears date 1597, was on Saturday shored up with timber to prevent its falling. The front has so pressed upon the window that the casement is forced out of position, and the top has bulged outwards, breaking several small panes of glass. The house is one of the most interesting sights of the town. Some fears have of late been entertained as to its safety.

### GENERAL.

**Mr. T. Chatfield Clarke, F.R.I.B.A.,** will on January 1 take his son into partnership.

**The Pictures by M. Jundt,** which were sold lately at the Hôtel Drouot, in Paris, realised 38,200 frs. The painter was killed in the early part of the year by falling from a window.

**Mr. John Brett, A.R.A.,** is painting for the next Academy Exhibition an extensive view over the hills at Sark. The *South-westerly Gale on the Cornish Coast*, one of Mr. Brett's contributions to the last exhibition, will shortly be engraved.

**M. Legros,** Slade Professor in the University of London, intends to give a course of lectures on the art of etching, from illustrations in the department of prints and drawings at the British Museum.

**The Statue of Queen Anne** in front of St. Paul's Cathedral is to be replaced, at the cost of the Corporation of London, by a copy in Sicilian marble, which will cost 1,800*l.* The existing statue was executed in 1712 by Francis Bird, who was paid 1,180*l.* for the work.

**A Second Competition** has to be opened for the decoration of the Salle des Mariages in the Mairie of Courbevoie, in the environs of Paris. Fifty-seven designs were sent in by French painters, but the judges considered that all were inadequate.

**The Annual Conversazione** of the North London School of Art took place on Monday. Mr. Phil. Morris, A.R.A., who distributed the prizes, said there were 200,000 art students in the country. The influence of art in a home was an influence for good; and these schools were doing a great work in spreading the love and knowledge of art both at home and abroad.

**Sir Henry Dryden** opened on Wednesday evening an International Photographic Exhibition in Northampton Museum Galleries. Specimens have been sent from all parts of the world.

**Mr. Barbour,** architect, has been commissioned to prepare a report on the means of egress at the theatre and public halls in Dumfries.

**Mr. Hay,** architect, has prepared a design for the proposed new royal pew in St. Giles's Cathedral, Edinburgh. The platform is 32 feet long, and the canopy 40 feet high.

**Mr. James Lessels** was on Tuesday re-elected architect to the Edinburgh Improvement Trust for the following year.

**The Plans** for the remaining wing of the Edinburgh Museum of Science and Art are now ready, and estimates being taken for the building.

**The Fund** for the restoration of the spire and church of St. Michael's, Coventry, has now reached over 19,600*l.*, so that only about 400*l.* remains to be obtained before Mr. George Woodcock's offer of 10,000*l.* can be accepted.

**The Bridgewater Navigation Company,** at a meeting held on Wednesday in Manchester, decided to adopt a scheme for improving the navigation of the Rivers Orwell and Mersey, at a cost of 324,000*l.*

**A New Dock,** which has cost 120,000*l.* to construct, was opened at Boston on Monday last.

**The Alexandra Palace** is to be lighted by the Gülcher Electric Light and Power Company.

**A New Board School** is to be erected in Infirmary Street, Edinburgh, for children in the south-eastern part of the city.

**A New Certificate** has been granted by the Board of Trade to the effect that the International Inventions Exhibition is an international exhibition, and all the protection accorded from May 1 to inventions under the original certificate will be secured, in addition, from March 1 till May 1, *i.e.*, during the time in which the exhibits will be received and arranged.

**A Design** by Mr. Neil Macara, of Darlington, has been selected for the proposed new buildings of the West Hartlepool Young Men's Christian Association.

**The Edinburgh Forestry Exhibition** has produced a surplus of 300*l.* after payment of expenses, which it has been suggested should be appropriated as the nucleus of a fund for founding a chair and museum of forestry at the Edinburgh University.

**The Old Town Hall,** Grangemouth, has been sold by auction for 1,290*l.* to a draper.

**The Art Gallery** at Leicester is to be opened on January 6 next.

**Mr. R. W. Johnson,** Surveyor to the Local Board of Kettering during the last twelve years, has died suddenly at his residence, Melton Mowbray. Mr. Johnson's practice as an architect at Kettering extended over a period of twenty-four years, and most of the dwelling-houses and factories there have been erected from his designs.

**The Belfast Plasterers** have protested against the contract for the plastering of the Free Library being given to Mr. James Caird, of Glasgow, whose tender is said to have been 2,000*l.* in excess of that of Messrs. Martin's, who are the general contractors.

**The Erewash Valley Ironworks,** which cost originally 80,000*l.*, were sold by auction on the 10th inst. for 9,100*l.* The property comprised four large furnaces, sixteen cottages, and twenty acres of land.



# SUPPLEMENT

TO THE

# ARCHITECT.

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, DECEMBER 20, 1884.

### NOTICE.

The next Number of THE ARCHITECT will be published on Wednesday, December 24. All advertisements intended for insertion in that Number must reach the Office not later than 5 P.M., on Tuesday, December 23.

### COMPETITIONS OPEN.

**CHELSEA.**—Feb. 25.—Plans are invited for Additions to the Vestry Hall. Premiums of 100, 50, and 30 guineas. Mr. J. Elsdell Salway, Clerk of the Vestry, King's Road, Chelsea.

**FALMOUTH.**—Dec. 24.—Plans are required for the Erection of Wesleyan Sunday School Premises, with Class-rooms, &c. Mr. F. L. Earle, Falmouth.

**KING'S NORTON.**—Jan. 15.—Plans for the Erection of Four Cottage Homes upon Lands situate at Shenley Fields are required. Mr. Ralph Docker, Clerk of King's Norton Union, Colmore Row, Birmingham.

**KING'S NORTON.**—Jan. 15.—Plans are invited for the Erection of a Laundry, at the Workhouse, Selly Oak. Mr. Ralph Docker, 57 Colmore Row, Birmingham.

**NEWCASTLE-UNDER-LYME.**—Dec. 31.—The Corporation offer Premiums of 100 guineas, 30 guineas, and 20 guineas, for first, second, and third selected Designs for Public Baths, Free Library, and Assembly Room. Mr. James Pattison, Borough Surveyor, Newcastle-under-Lyme.

### CONTRACTS OPEN.

**ANDOVER.**—Dec. 23.—For Building Dwelling-house. Mr. Henry Edwards, Winchester Street, Andover.

**ASPATRIA.**—Dec. 20.—For Building Oil house, Granary, Coal-house, Hay-barn, Shop, Slaughter-house, and other Buildings. Mr. Henry Cooper, Co-operative Stores, Aspatria.

**BERMONDSKY.**—Jan. 9.—For Additions, Machinery, and Engineering Works at Public Baths. Messrs. G. Elkington & Son, Architects, 95 Cannon Street, E.C.

**BEXHILL.**—Jan. 15.—For Enlarging and Part Rebuilding Church of St. Mark. Messrs. Riches & Esam, Architects, Station Road, Bexhill.

**BILLESDON.**—Jan. 2.—For Building Additional Vagrant Wards at the Workhouse. Mr. Bird, Surveyor, 16 Humberside Road, Leicester.

**BLAYDON-ON-TYNE.**—Jan. 8.—For Construction of Two Covered Service Reservoirs, &c., and Laying Cast-iron Pipes (12,800 yards), Supply of Cast-iron Pipes, Valves, Hydrants, &c. Mr. H. Laws, C.E., 18 Grainger Street West, Newcastle-on-Tyne.

**BRADFORD MOOR.**—Dec. 20.—For Building Four Houses. Mr. William Rycroft, Architect, 12 Bank Buildings, Manchester Road, Bradford.

**BURSLER.**—For Sewering and Forming Intended Streets, Longport Hall Grounds. Mr. A. R. Wood, Architect and Surveyor, Tunstall.

**BURY.**—Dec. 22.—For Supplying 500 lineal yards Salt Glazed Fireclay Invert Blocks. Mr. J. Cartwright, C.E., Borough Surveyor, Bank Street, Bury.

**BURY.**—Dec. 22.—For Supplying Iron Castings for Waterworks. Mr. Thomas Rigby, Waterworks Manager, Parson's Lane, Bury.

**BUSLINGTON.**—Dec. 24.—For Restoration of Work-shops and Sheds at Leather Works. Messrs. Wilson & Bailey, Architects, 35 Park Square, Leeds.

**CANTERBURY.**—Dec. 30.—For Building Cellars, Malt Store, &c., and Removal of existing Buildings, Dane John Brewery. Messrs. Stopes & Co., Architects, 24A South-wark Street, S.E.

**CARLISLE.**—For Building Home for Incurables. Mr. G. D. Oliver, Architect, Carlisle.

**CHATHAM.**—Dec. 24.—For Construction of Iron Pier on Site of existing Sun Pier on the Medway. Messrs. Law & Chatterton, C.E., 46 Queen's Anne's Gate, Westminster.

**COCKERMOUTH.**—Dec. 25.—For Converting Schools into Chapel. Mr. R. S. Marsh, Surveyor, Cockermouth.

**CROSS HILLS.**—Dec. 22.—For Building Six Houses at Sutton Mill, and Construction of Sewer. Mr. S. Jackson, Architect, 33 Kirkgate, Bradford.

**CROSS HILLS.**—Jan. 5.—For Extension of Hayfield Mills Premises, Glusburn. Messrs. Petty & Ives, Architects, Waterhouse Street, Halifax.

**CUCKFIELD.**—Dec. 23.—For Additions to National School Buildings. Mr. F. W. Holloway, Architect, Hayward's Heath.

**DELPH.**—Dec. 20.—For Building Wesleyan Infant School. Mr. Alexander Banks, Architect, 231 Rochdale Road, Oldham.

**DENHOLME.**—Dec. 22.—For Extensions to White Shaw, Messrs. Milne & France, Architects, 99 Swan Arcade, Bradford.

**DONCASTER.**—Dec. 22.—For Building Church or Church school at the Holmes. The Secretary, Holmes Church Committee, Mansion House, Darlington.

**DUNDEE.**—Dec. 20.—For 4,000 yards of Whinstone Kerb, 6 inches thick, and 4,000 yards of Whinstone Channel, 9 inches broad. Mr. Wm. Mackison, Burgh Engineer, 79 Commercial Street, Dundee.

**DUNFERMLINE.**—Dec. 22.—For the Mason, Joiner, Plumber and Gasfitter, Slater and Plaster Works of Additions and Alterations at the Carnegie Works. Messrs. Campbell Douglas & Sellars, Architects, Glasgow.

**DYONSDALE.**—Dec. 26.—For Building Board Schools, Mr. W. Yates, Clerk to the School Board, Distington.

**EDINBURGH.**—Dec. 23.—For Construction of Public Wash-houses and Baths. The Superintendent of Public Works, 11 Royal Exchange, Edinburgh.

**ESON.**—Dec. 31.—For Building Cottage at Cemetery. Mr. R. Moore, Architect, 7 Albert Road, Middlesbrough.

**EXETER.**—Jan. 6.—For Alterations and Additions to Homesteads on Barton Farm, Broadclyst, and Upton

Farm, Clyst Saint Lawrence. Mr. C. E. Ware, Gandy Street Chambers, Exeter.

**FARNHAM.**—Jan. 1.—For Rebuilding Plough Inn. Mr. S. Stapley, Architect, West Street, Farnham.

**FRODSHAM.**—Dec. 22.—For Sewering District of New-town. Mr. H. Bancroft, C.E., 83 Mosley Street, Manchester.

**GLASGOW.**—Dec. 22.—For Forming Main Sewer in Grounds of Belvidere Hospital. Mr. John Carrick, Master of Works, City Chambers, 74 Hutcheson Street, Glasgow.

**GLEADLESS.**—Dec. 20.—For Building Villa. Mr. John Clark, Architect, 38 Norfolk Street, Sheffield.

**GOOLE.**—Dec. 22.—For Excavation, Filling, and other Works in Formation of Goods Yard. The Engineer, Hunt's Bank, Manchester.

**GUIDE BRIDGE.**—Jan. 9.—For Constructing Footbridge and Subway at Railway Station. The Engineer, 28 London Road, Manchester.

**HOLNWOOD.**—Dec. 23.—For Building Retort-house. Shed, and Chimney. Mr. H. Andrew, Gas and Water Offices, Oldham.

**HUDDERSFIELD.**—Dec. 30.—For Building House, Boundary Walls, and Out Offices. Messrs. John Kirk & Sons, Architects, Huddersfield.

**HUNCOAT.**—Dec. 22.—For Building Waiting-room, Booking-office, &c., at Station. The Engineer, Hunt's Bank, Manchester.

**IPSWICH.**—For Additions to Business Premises. Mr. E. F. Bishopp, Architect, 32 Museum Street, Ipswich.

**KENDAL.**—Dec. 30.—For Building Tower, Crosthwaite Church. Mr. J. Bintley, Architect, 7 Lowther Street, Kendal.

**MAIDSTONE.**—Dec. 27.—For Laying Sewer, College Walk. Mr. E. Hoar, Local Board Office, Maidstone.

**MIDLAND RAILWAY.**—Dec. 22.—For Building Boiler-house and Chimney Shaft, Derby. Mr. A. Langley, Engineer, Midland Railway, Derby.

**NEWCASTLE-ON-TYNE.**—Dec. 22.—For Building Printing Works, Fenkle Street. Mr. J. W. Taylor, Architect, 33 Westgate Road, Newcastle-on-Tyne.

**NORTH SHIELDS.**—Dec. 20.—For Building Keeper's Lodge and Stable for Cricket Club. Mr. H. Gibson, Architect, 101 Howard Street, North Shields.

**PEEL.**—Dec. 23.—For Taking Down Wooden Drill Shed, Battery, Magazine, and Latrines at Barrow-in-Furness. Removing and Re-erecting at Peel. Director of Works-Department, Admiralty, 71 Spring Gardens.

**PENDLETON.**—Jan. 12.—For Construction of Railway from Pendleton to Hindley (13 miles 9 chains); Connecting Line at Agercroft (38 chains); and Connecting Line at Westthroughton (1 mile 30 chains). The Engineer, Hunt's Bank, Manchester.

**PLYMOUTH.**—Jan. 5.—For Building Cattedown Road Schools, Caretaker's Residence, &c. Mr. H. J. Snell, Architect, Courtenay Street, Plymouth.

**PONTYPRIDD.**—Dec. 24.—For Additions to Cilfynydd Inn. Mr. John Williams, Architect, 3 Edward Street, Morgantown, Merthyr.

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PRIZE MEDAL AWARDS: KENSINGTON, MANCHESTER, LIVERPOOL, DONCASTER 1882-3.  
THE ONLY GLAZING AWARD. INTERNATIONAL HEALTH EXHIBITION, 1884.



**POINT-OF-THE-INCHES.**—Dec. 24.—For Erection of Buildings for the North of Scotland Navigation Company. Messrs. Jenkins & Marr, Architects, 16 Bridge Street, Aberdeen.

**PWILLHILL.**—Jan. 1.—For Building Parish Church. Rev. D. Jones, Vicar, Pwllheli.

**RAINFORD.**—Dec. 22.—For Building Cottages. The Engineer, Hunt's Bank, Manchester.

**RUNCORN.**—Jan. 6.—For Building Board Schools, Greenway Road, in Two Departments (207 Girls and mixed, 274 Children). Messrs. F. & G. Holme, Architects, 8 Westminster Chambers, Dale Street, Liverpool.

**SHEFFIELD.**—Dec. 24.—For Building Goods Offices. The Resident Engineer, Victoria Station, Sheffield.

**SOUTH SHIELDS.**—Dec. 20.—For Building Hall in Alice Street. Mr. J. H. Morton, Architect, South Shields.

**STOUGHTON.**—Dec. 30.—For Building Board School. Mr. S. Welman, Architect, High Street, Guildford.

**SWANSEA.**—Dec. 29.—For Additions to Danygraig School. Mr. E. Sidney Hartland, 5 Rutland Street, Swansea.

**SWANSEA.**—Dec. 31.—For Construction of Stoneware Pipe Sewers (3,000 yards) and Cast-iron Pipes (750 yards) for Sewerage of Port Tennant. Mr. R. H. Wyrill, Borough Engineer, Guildhall, Swansea.

**TARBERT.**—For Providing and Laying Fireclay and Cast-iron Pipes for Water Supply from Loch Chaorunn, and Extension of existing Mains; also Constructing Filters and other Works, Providing and Laying Fireclay Pipes for Main and Branch Sewers, Cast-iron Pipes for Outfall, Constructing Manways, and other Works. Messrs. Niven & Haddin, C.E., 131 West Regent Street, Glasgow.

**TOTTENHAM.**—Dec. 23.—For Construction of Brick Sewer, &c. Mr. de Pape, Engineer, Local Board Offices, High Street, Tottenham.

**YORK.**—Dec. 22.—For the Construction of Flood Banks, Subsiding Reservoir, Filter Beds, &c., at Pumping Station, near Accomb Landing. Mr. C. Hornsey, Engineer, 16 Railway Street, York.

## TENDERS.

### CARDIFF.

For the Construction of Sewers on the Penllyn Castle Estate, at Canton, Cardiff, for Mr. J. G. Richards Homfray. Mr. T. Waring, C.E., 12 St. John's Square, Cardiff.

Green	£768 5 8
Day	677 13 10
Allan	605 14 3
Franklin	589 5 0
Munday & Shepherd	577 6 5
Rees, jun., Ely, Cardiff	554 8 11
PEARSON (accepted)	508 10 4

All of Cardiff.

### CHESTER.

For Building Museum, with Schools of Science and Art, Chester. Mr. THOMAS M. LOCKWOOD, Architect, 80 Foregate Street, Chester. Quantities supplied.

#### For Terra-cotta Dressings.

Forrester & Mayers, Chester	£9,350 0 0
Vernon, Chester	9,270 0 0
Andrews, Chester	9,100 0 0
Tyson, Liverpool	9,035 0 0
Bull, Sons & Co., Southampton	9,000 0 0
Parrott, Chester	8,965 0 0
Browne, Chester	8,890 0 0
Hughes, Chester	8,850 0 0
Brown & Backhouse, Liverpool	8,824 0 0
Hamilton, Altrincham	8,750 0 0
Munnerley, Rebbington	8,603 0 0
Gallimore, Newcastle	8,595 0 0
Matthews, Nantwich	8,500 0 0
Warburton, Manchester	8,400 0 0
GABBUTT, Liverpool (accepted)	7,956 0 0
Architect's estimate	8,500 0 0

#### For Stone Dressings.

Vernon, Chester	£9,390 0 0
Forrester & Mayers, Chester	9,300 0 0
Tyson, Liverpool	9,255 0 0
Bull, Sons & Co., Southampton	9,213 0 0
Andrews, Chester	9,175 0 0
Hughes, Chester	9,120 0 0
Browne, Chester	9,100 0 0
Munnerley, Rebbington	9,040 0 0
Brown & Backhouse, Liverpool	9,021 0 0
Hamilton, Altrincham	8,924 0 0
Gallimore, Newcastle	8,850 0 0
Parrott, Chester	8,840 0 0
Matthews, Nantwich	8,739 0 0
Warburton, Manchester	8,700 0 0
GABBUTT, Liverpool	8,500 0 0
Gabbutt, Liverpool	8,151 0 0

### COVENTRY.

For the Construction of New Street and the Drainage of Building Land, Cope Street, Coventry. Mr. HERBERT W. CHATTAWAY, Surveyor, Trinity Churchyard, Coventry.

Smith, Milverton	£399 0 0
Haywood, Jun., Coventry	395 0 0
BOON (accepted)	383 0 0

For Building New Wing and General Renovations to Springfield House, Keresley, Coventry. Mr. WILLIAM TOMLINSON, Architect, Coventry.

Johnson, Leicester	£950 0 0
Haywood, Coventry	875 0 0
BEACHAM, Allesley (accepted)	725 0 0

### CANNINGTON.

For the Restoration of Cannington Church, Somerset. Messrs. DOWN & SON, Architects, Bridgwater.

Pearce, Minehead	£1,625 12 0
Kitch, Bridgwater	1,606 0 0
Pollard, Bridgwater	1,480 0 0
Merrick & Son, Glastonbury	1,475 0 0
Harris & Tapscott, Bridgwater	1,467 10 0
SPILLER, Taunton (accepted)	1,450 0 0

### EDINBURGH.

For Building Police Station at Causewayside, Edinburgh. Mr. MORHAM, City Architect.

Watson & Sons, mason	£2,000 0 0
Watson & Sons, joiner	935 0 0
Ross & Son, plasterer	188 0 0
Barton & Sons, plumber	179 0 0
Anderson & Son, slater	77 17 0

### FORDINGBRIDGE.

For Lodge, Coach-house, and Stabling at Hiffield, Fordingbridge, for the Executors of the late Mr. J. R. Neave. Mr. FRED. BATH, A.R.I.B.A., F.S.I., Crown Chambers, Salisbury, and 342 Strand, London, W.C., Architect. Quantities supplied.

	The Whole.	Deductions.
Dobnan, Salisbury	£1,700 0 0	£205 0 0
Shering, Fordingbridge	1,684 0 0	213 0 0
Meador, Wimborne	1,660 0 0	200 9 9
Smith, Wimborne	1,650 0 0	195 8 0
Tryhorn, Salisbury	1,650 0 0	257 14 0
Wort, Salisbury	1,626 0 0	195 0 0
Mitchell, Downton	1,565 12 0	246 10 0
Harris, Salisbury	1,484 0 0	243 0 0
YOUNG & SONS, Salisbury*	1,497 10 0	267 10 0

\* Accepted subject to modifications.

### GRAVESEND.

For Building Small House, Gravesend, for Mr. G. T. Willis, Jun. Mr. A. G. SMITH, S.A., Architect. Quantities not supplied.

Nightingale	£558 0 0
Goldfinch	556 17 0
W. & E. Wallis	471 0 0
RAYNER (accepted)	459 0 0

### HIGH BIRKS.

For Building Fireclay Works at High Birks, Thornton near Bradford. Mr. JOHN DRAKE, Architect, Queensbury. Quantities by the Architect.

#### Accepted Tenders.

Knowles & Halstead, Bradford, ironfounder	£406 0 0
Nelson, Bradford, slater	219 10 0
Patchetts, Clayton Heights, joiner	189 18 0
Ward, Halifax, plumber	47 10 0
Holdsworth, Bradford, plasterer	30 0 0

### HILDERTHORPE.

For New Offices for Messrs. Medforth & Hutchinson, Hilderthorpe. Mr. J. EARNSHAW, Architect, Wellington Road, Bridlington Quay.

Hudson	£452 16 0
Owston & Bailey	435 0 0
Rennard	373 10 5
Gray	335 0 0
LEESON (accepted)	309 0 0

### LEICESTER.

For Alterations and Additions to the Disinfecting Chamber at the Fever Hospital, Groby Road. Mr. J. GORDON, M.I.C.E., Borough Engineer, Leicester.

Atkins & Co.	£174 13 0
Bass	170 0 0
Major	169 3 6
Jewsbury	164 10 0
RICHARDSON & SONS (accepted)	159 6 0

All of Leicester.

### LONDON.

For Building Metropolitan Free Hospital, Kingsland Road. Mr. H. H. COLLINS and Mr. JAMES EDMESTON, Joint Architects. Quantities supplied by Messrs. Hovenden, Heath & Berridge.

Hunt	£23,300 0 0
Williams & Sons	23,200 0 0
Woodward	23,067 0 0
Collis & Son	23,050 0 0
Shepherd	22,975 0 0
Higgs & Hill	22,940 0 0
Boyce	22,510 0 0
Kirk & Randall	22,420 0 0
Conder	22,363 0 0
Asby & Horner	22,270 0 0
Perry & Co.	22,236 0 0
Brass	21,877 0 0
Gentry	21,500 0 0
Morter	21,327 0 0
Smith & Son	21,111 0 0
Lawrence & Son	21,019 0 0
Mowlem & Co.	20,890 0 0
B. & F. Croaker	20,860 0 0
Downs	20,835 0 0
Shurmur	20,574 0 0

#### Addition for Oak Flooring.

Collis & Son	£1,576 0 0
Boyce	1,550 0 0
Conder	1,512 0 0
Mowlem & Co.	1,380 0 0
Higgs & Hill	1,200 0 0
Lawrence & Son	1,050 0 0
Brass	1,100 0 0
Asby & Hornby	1,088 0 0
Woodward	929 0 0
Shepherd	909 0 0
Perry & Co.	850 0 0
Morter	705 0 0
B. & F. Croaker	660 0 0
Hunt	640 0 0
Smith & Son	597 0 0
Downs	550 0 0
Shurmur	540 0 0
Williams & Son	530 0 0
Kirk & Randall	400 0 0
Gentry	350 0 0

### LONDON—continued.

For Making Road and Laying Down Pipe Sewer and Building Retaining Brick Walls, Pentonville Hill, Clerkenwell.

McKenzie	£2,296 0 0
Neave & Son	1,705 0 0
Wilkinson	1,666 0 0
Pizzey	1,222 0 0
Killingback	1,135 0 0

For Fixing and Heating and Hot-water Supply Apparatus at Business Premises, Cope Street, Dublin. BACON & CO., London (accepted).

For Heating the Turkish Baths, County Lunatic Asylum, Colney Hatch. BACON & CO., London (accepted).

### LINCOLN.

For the Construction of St. Catherine's Road and Road adjoining. Mr. R. A. M'BRAIR, City Surveyor, Lincoln.

Slinger, Cleckheaton	£592 0 0
Smart, Nottingham	395 0 0
H. S. & W. Close, Lincoln	370 0 0
Roberts, Bradford	343 0 0
Green, Washington	339 0 0
Copley, Lincoln	325 0 0
Dawson, Lincoln	302 0 0
Hampshire, Lincoln	289 0 0
Rush & Shepherd, Lincoln	270 0 0
Bradley, Lincoln	268 0 0
BINNS, Lincoln (accepted)	261 0 0

### MILLOM.

For Building Six Cottages for Holborn Hill Industrial Society, Milloom.

#### Accepted Tenders.

H. Richardson, Seescale, walling	£694 0 0
W. R. Richardson, Milloom, joiner	261 0 0
Atkinson, Milloom, plastering	118 7 0
Mills, Milloom, plumbing	

#### Whole of the Works.

Balderston, Broughton-in-Furness	1,313 0 0
Graham, Milloom	1,220 8 0
Bradley, Milloom	1,204 7 0
Tomlinson, Milloom	1,132 15 0
W. R. Richardson, Milloom	1,104 0 0

### RUSHDEN.

For Building Five Cottages, Rushden.

Hackley, Wellingborough	£705 0 0
Bayes, Rushden	699 0 0
Underwood, Wellingborough	690 0 0
Foskett, Rushden	675 0 0
Sparrow, Rushden	656 0 0
Halford, Rushden	645 0 0

### TEBAB.

For Erection of Farm Buildings, Town Foot, Tebay. Messrs. HOGGARTH BROS., Architects and Surveyors, Kendal.

#### Mason Work, Walling, &c.

Thoms, Kendal	£240 0 0
Dixon, Kendal	200 0 0
Hodgson & Shepherd, Orton	161 0 0
STONEY, Tebay (accepted)	134 0 0
Thornborrow, Tebay	121 15 0

#### Carpenter and Joiner Work.

Stables, Kendal	135 0 0
Benson, Kendal	130 10 0
Brunskill, Gaisgill	130 0 0
Robertson & Son	122 10 0
Sedgwick, Sedbergh	113 7 0
THWAITES & SON, Kendal (accepted)	103 0 0
Ward, Tebay	100 0 0
Stephenson, Orton	93 10 0

#### Plumbing, Glazing, &c.

Ward, Tebay	21 0 0
Gibson, Kendal	21 0 0
Sedgwick, Sedbergh	16 19 6
Garnett, Sedbergh	16 9 6
TANNER, Kendal (accepted)	12 15 0

#### Slating.

Messrs. WILSON, Orton (accepted)	29 0 0
Shepherd, Orton	25 5 0

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For new Causeways and other Road Improvements, Thornhill. Mr. C. W. GREENWOOD, Surveyor.

#### Brewery Road.

Wilcock, jun., Thornhill	£642 0 0
Godley, Dewsbury	632 19 6
Parker & Sharpe, Batley	574 0 1
Frith, Dewsbury	571 15 10
Kilburn, Thornhill	558 0 7
Slinger, Cleckheaton	555 3 5
Coates & Turner, Dewsbury	547 8 7
J. & T. Audsley, Dewsbury	530 7 3
Brier & Wilson, Savile Town	519 9 3
Garforth, Mirfield	512 0 8
HART & BRIER, Dewsbury (accepted)	500 0 0

#### Savile Road.

Kilburn, Thornhill	361 19 4
Parker & Sharpe, Batley	271 5 7
J. & T. Audsley, Dewsbury	260 5 2
Frith, Dewsbury	248 7 10
Slinger, Cleckheaton	246 0 0
Coates & Turner, Dewsbury	218 5 3
Godley, Dewsbury	216 1 10
BRIER & WILSON, Savile Town (accepted)	210 0 0
Wilcock, jun., Thornhill	208 0 0
Garforth, Mirfield	206 2 5

#### Combs Road.

Kilburn, Thornhill	103 0 6
Wilcock, jun., Thornhill	103 0 0
Godley, Dewsbury	100 19 0
Frith, Dewsbury	93 16 10
Coates & Turner, Dewsbury	93 3 3
Garforth, Mirfield	91 0 9
Slinger, Cleckheaton	93 10 0
Brier & Wilson, Savile Town	85 13 11
J. & T. Audsley, Dewsbury	84 3 0
Parker & Sharpe, Batley	82 4 10
HEMINGWAY, Ossett (accepted)	74 7 7



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No competition.

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Killingback . . . 1,025 0 0  
Burnham . . . 965 0 0  
Shepherd . . . 890 0 0  
Belham . . . 850 0 0  
Holliday . . . 821 0 0  
Cardus . . . 798 0 0  
Batchelor . . . 790 0 0  
Haynes . . . 779 16 4  
Pinfold . . . 770 10 0  
Pizzev . . . 765 0 0  
Priestley . . . 719 0 0  
Wood . . . 705 0 0

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For Works of Exterior Repair in the Restoration of St. Mary's Church, Warwick.  
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Smith, Milverton . . . £596 0 0  
*North and South Transepts.*  
Smith . . . 449 0 0  
*Tower Piers.*  
Smith . . . 223 0 0  
*Tower Balustrade and Cornice.*  
Smith . . . 582 0 0  
*Draining Churchyard.*  
Smith . . . 260 0 0

**WELLINGBOROUGH.**

For Building House at Broad Green, Wellingborough, for Mr. W. J. Henry.  
Marriott . . . £290 0 0  
Underwood . . . 219 0 0  
Henson . . . 210 0 0  
Leete . . . 198 0 0  
Brown . . . 182 0 0  
HACKSLEY (accepted) . . . 179 0 0

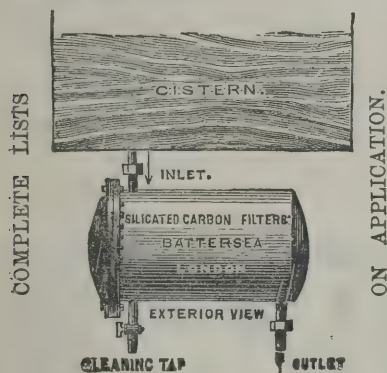
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For Roads and Pipe Sewers, Grove House Estate, Windsor.  
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Sherry . . . 1,098 0 0  
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Pizzev . . . 999 0 0  
Nicholls . . . 997 0 0  
Adams . . . 979 0 0  
Pound . . . 975 0 0  
Cooker . . . 957 0 0  
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Roland . . . 947 0 0  
Bamfylde . . . 924 0 0  
Bothams . . . 892 0 0  
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Hare . . . 799 0 0  
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The same can be attached to any design of a Register or  
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been very successful, and given every satisfaction where I  
have used it. "Yours, &c.  
"JAMES WEIR, F.R.I.B.A.  
"To Mr. Grundy."  
"Baptist Chapel, Clapham Common, London. Richard  
Webb, Pastor, 10 Grafton Square.  
"February 15, 1884.  
"DEAR MR. GRUNDY,—I have pleasure in testifying to the  
excellency and efficiency of your patent Fire-Grate. It is  
the most charming invention for heating a large room I  
have ever known. I shall have pleasure in showing it to  
anyone who wish to have their schools or rooms pleasantly  
and efficiently heated."  
From James Garry, Esq., Architect, West Hartlepool,  
July 1884.  
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adopted by me in school at Seaton, and a second in a  
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A horizontal boiler, 17 ft. 6 in. long, 15 H.P., gave the following results:—

Temperature on Plates ..	..	..	..	..	188 deg.
„ „ „ „ „ „	„	„	„	„	94 „

One ton of coal was saved per week, and, although the fire was raked out every evening 20 lbs. of steam were in the boiler next morning.

The following testimonial refers to this covering:—

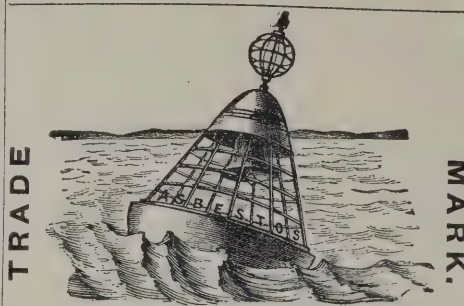
Dear Sir,—It may interest you to know that we save exactly 40 per cent. in fuel through using your covering.—Yours truly,  
W. SANTO CRIMP, C.E., F.G.S.

**BELL'S ASBESTOS PAINT**, for floors, stairs, and all interior woodwork, to prevent the spread of fire. This paint is especially useful in cotton mills, and in fact in all factories and buildings exposed to risk from fire. It is quite free from poisonous ingredients, and is both easily and cheaply applied. Bell's Asbestos Paint has, on several occasions, done great service in preventing the loss of life and property. The great fire in Buchanan Street, Glasgow, in November last, produced the following testimony to the value of this material:—

Offices of the *Glasgow Herald*, the *Weekly Herald*, and the *Evening Times*.

Mr. John Bell,  
Sir,—As one of the means that helped to save our buildings extending from Buchanan Street to Mitchell Street from the recent great fire, I think it fair to say that your Asbestos Paint, which was applied to the outside hoist of the *Evening Times* case-room and other portions, gave valuable proof that it materially aided in resisting the flames from the immediately adjoining tenement while the fire was rapidly destroying it and threatening us in the most serious form. Since the fire, and to assure myself further of the value of the Asbestos Paint as a fire-resister, I placed a piece of wood, with your paint put on more correctly than in our case, into one of our furnaces. With the result that it was brought out without a fibre of the wood being touched, while similar pieces of wood, thrice coated with Irish Lime, at once got into a flame.—Yours truly,  
(Signed) ALEX. SINCLAIR.

**BELL'S ASBESTOS SASH-LINE CORD** is unaffected by heat and damp, and renders unnecessary the use of metallic wire and chains. Ropes made in the same form have great tensile strength, and being indestructible by fire are of incalculable value for fire escapes.



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**BELL'S ASBESTOS AND INDIA-RUBBER WOVEN TAPE AND SHEETING** for making every class of steam and water joint. It can be bent by hand to the form required, without puckering, and is especially useful in making joints of manhole and mudhole doors on boilers; also for large "still" joints, where boiling fat and steam have to be resisted. It is kept in stock in rolls of 100 feet, from 1-in. to 3-in. wide, and any thickness from  $\frac{1}{16}$  in. upwards. Manhole covers can be lifted many times before the renewal of the jointing material is necessary. The same material is made up into sheets about 40 in. square, and each sheet bears the trade mark, without which none is genuine. It is very necessary to guard against imitations of this useful material, and to secure themselves against being supplied with these less useful articles at my price, users are recommended to see that every 10-ft. length of the Asbestos Tape purchased by them bears the trade mark.

**BELL'S ASBESTOS CEMENT** for the backing of firebricks and furnaces. The use of this fireproof material saves the expense and annoyance occasioned by the repairs so constantly required in the firebricks and kitchen ranges of private houses. Any labourer accustomed to handle other cements can apply this.

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# The Architect.

## AN ARCHITECTS' CONVENTION IN AMERICA.



THE position of American architects cannot fail for many reasons to excite interest among their English brethren, and we are confident that our readers will be glad to hear something about the foundation of the new Architectural Society in Chicago. That city is by itself a memorial of the enterprise and pluck which characterise the United States. The fire which consumed Chicago little more than a dozen years ago was enough to overwhelm a state for a generation at least. But no time was lost, and a new Chicago has

arisen, with buildings that would do credit to any city in Europe. It is also satisfactory to know that the fine streets are not made up of those speculative structures which have to change hands a great many times before they can be said to have owners. The city has a great and genuine trade, extending to nearly all parts of the globe, and while it flourishes there is a better prospect for architects and builders than can be found in the most brilliant feats of the Stock Exchange. Humble as they are, it can be truly said that tinned meat-cans form a firmer foundation for architecture than Wall Street prospectuses.

It is not surprising that many architects are attracted to the Illinois capital, which during the half-century of its existence has grown faster than any city ancient or modern. In the list of members of the new society there are nearly one hundred who reside in Chicago. Among them we find names which recall England, Ireland, and Scotland, with a great many which are clearly of German origin. There are some—such as RANDOLPH, CLEVELAND, CARROLL, LEE, and CLAY—which, on historic grounds, have a claim to be considered American.

The Convention of Architects commenced on the 12th of November last, and it was held in a building which is used for exhibiting building appliances. The hall was lent by the owner, Mr. H. L. GAY. A meeting of the kind does not take place every day, and it is not surprising that there was some little difficulty in arranging the procedure. In the first place a temporary chairman was appointed, Mr. BURNHAM, of Chicago, being selected. Then, in order to insure that non-professional persons should take no part in the proceedings, a committee was appointed to examine the credentials of all who were present. Afterwards Mr. BURNHAM delivered the thoughtful address which will be found in another column. The next part of the business was the election of permanent officers. It was considered that the selection should be entrusted to a committee of five members. After consultation, Mr. BURNHAM was selected as president and Mr. TAYLOR as secretary by the committee. But here a difficulty arose. Mr. BURNHAM declared that, from his want of acquaintance with the duties of a chairman, he did not consider himself to be eligible for the office. Several names were accordingly proposed, and while some said the president ought to belong to Chicago, there were others in favour of an outsider. Eventually Mr. BURNHAM was induced to accept the office. With the appointment of a committee to prepare a draught of a constitution and by-laws for the society, the first day's proceedings came to a close.

On the second day, after some formal business, the meeting settled down to the important work of constitution making. In the first place, the name of the society had to be determined. "The Western Association of Architects" was proposed by the committee. One member suggested that the words "of the United States of America" should be added, but the alteration was declined. Another member considered that "Central" should be substituted for "Western," but, after a discussion of the geographical points which were involved, the original title was adopted. The declaration that "the objects of the association are to unite in fellowship the architects of the United States, to combine their efforts so as to promote the artistic, scientific, and practical efficiency of the profession, and to cultivate and encourage the study of the kindred arts," was at once accepted. It was also decided that the association is to

consist of fellows and honorary associates; and that any architect practising in the States may become a fellow.

It is well known that in America there are a great many local societies, and practically the business of the Western and similar associations consists in the holding of annual congresses. The annual meetings of the new body are to be held on the third Wednesday in November, in such places as shall be determined at the previous meeting. It may seem strange to hear of the founders of an architects' society making a by-law that the meetings should be conducted in accordance with CUSHING'S "Manual." But, where disputes are likely to arise, it is prudent to have a fixed standard. At Chicago ROBERTS'S "Rules of Order" was adopted, on the ground that it was a manual better fitted for small meetings. The settlement of fees gave little difficulty. An entrance fee of five dollars is to be paid by those who are not members of State associations or of the American Institute of Architects. The annual subscription is to be two dollars. No objection can be raised against the association on account of its costliness to members.

Architectural practice was considered on the third day of the convention. A committee had prepared a series of resolutions to the effect that in his relations to clients and contractors the architect should be an impartial arbitrator, and that under no circumstances should he act as a special-pleader for either party; that the relations between architects and clients should be confidential, and that no architect is worthy of employment who is unworthy of trust; that it was the sense of the association that the architect should in all cases superintend the work designed by him; that in cases where for special reasons the architect does not superintend the work designed by him, his responsibility ceases with the delivery and acceptance of the plans, unless by expert testimony it can be proved that the plans were defective; that the president, secretary, and treasurer of the association constitute a board of arbitration, whose duty it shall be to adjust all questions in dispute between members of the association and their clients, which should be submitted to the board. In regard to fees, it was proposed to follow the scale adopted by the American Institute of Architects.

It was inevitable that the subject of competitions should give rise to a good deal of discussion. The words of the resolution were "that no architect should enter a competition for any building or other work unless the decision of the competition shall be made by recognised experts." The first question that was asked was whether the resolution was to be binding on the members. It was said in reply that the committee who had framed the resolutions were of opinion that no resolutions or code of professional practice could, under all circumstances, be adhered to; what was proposed was simply an expression of the sense of the association which might be a guide to the members. In the course of the discussion a little was revealed about the conduct of people who institute competitions. From what the president stated it is plain that plans which are said to be unsuccessful are used by boards and committees without any compensation to the designers. Mr. BURNHAM said that in nine cases out of ten it is the custom to obtain plans from a number of architects and to manufacture a design from them without acknowledgment. All he wanted was that there should be an agreement in writing that every set of plans was to be returned without abstraction of any of the details. Yet, strange to say, the meeting was not prepared to go so far. It was said that the appointment of experts would remove the evil, but evidently many cases occur in which an expert is an impossibility. There are competitions for dwelling-houses and stores, where the building-owners believe they are competent to decide for themselves. One member rightly said that the association should insist on some kind of remuneration, if it were only that office expenses should be paid to every one who was invited to take part in a competition. When it is found that the plans first sent in are shown to the later competitors, one of the authorities saying, "We do not like this plan because of this feature, nor that because of that feature; if you can get out something better, go ahead," the first senders ought at least to have payment made to them. But as another architect said frankly, the authority or client is not altogether to blame in such cases. "We are too anxious to grasp," said Mr. CLAY, "to take and incorporate the ideas of others, and if every architect would refuse when he was making a working drawing to incorporate any idea of another,



he would very soon stop this sort of thing." After much discussion it was proposed to alter the resolution to the following:—"That no architect should enter into a competition for any building or other work unless the decision of the competition shall be made by recognised experts, who shall be appointed before competitive drawings are prepared, and who shall be accepted by competing architects." A long debate arose on the additions. One speaker said that if the experts are appointed before the architects compete, a man can decline to go into the competition should he not approve of them. Another said the resolution was an impossibility. A third objected to the phrase "recognised experts," as he believed it was absurd to expect a committee to decide on the experts before the competition had been advertised. On the other hand, there were speakers who maintained that the competitors should be satisfied on all points before they prepared their designs. Finally the matter was left to the consideration of a special committee.

Among other business it was afterwards decided that the place of meeting in 1885 was to be St. Louis, with Mr. ILLSLEY for chairman, Mr. GAY for secretary, and Mr. ADLER for treasurer. A banquet was not the least important part of the convention, for, as one of the speakers said, architects are strangers to one another, except when thrown together in the way of business, and those occasions are not always conducive to friendliness and fellowship.

About the time when the Royal Institute of British Architects was in course of formation in London, settlers were arranging with the red Pottawatomies for the land on which Chicago stands. It would be strange if there was not some difference between the first meetings of the English and the American Societies. The meeting at 43 King Street, Covent Garden, was presided over by a nobleman, who confessed that he was incompetent to fill the office, for he knew nothing of architecture as a science; and in deference to his lordship a sort of *dilettante* air was spread over the business of the first and many subsequent meetings. It would be indecorous to bring sordid subjects like those arising out of professional practice before so esteemed a nobleman. The Chicago architects are not, fortunately for themselves, troubled with impediments of that kind. They see no necessity for separating architecture from architects, and the first place in the programme is given to subjects which are essential to the existence of the profession. Is it not possible that of the two bodies, the Western Association has more shrewdness and a wiser recognition of fitness?

## SEMPER AND THE DEVELOPMENT THEORY.

By PROFESSOR G. BALDWIN BROWN.

THE attention which has been directed, through the pages of *The Architect*, to the late GOTTFRIED SEMPER, is a fitting tribute to a man of true genius. Few students of artistic history have read SEMPER "On Style" without feeling that its perusal made an epoch in their studies. Possessing a philosophic mind, he surveyed with a rapid glance the artistic development of the human race as a whole, and it fascinated him to trace the working of great principles through widely differing times and places. He may sometimes have driven his theories too far, as when he assumes a large use by the ancients of tubular construction in metal, though the only certain employment of it was, I believe, in the roof of the Pantheon at Rome. It is remarkable, however, what a vast collection of solid facts he got together from all regions and periods, and he seems to have possessed in addition a rare faculty of divination, which led him to anticipate some of the most recent results of archæological science. But the qualities which give SEMPER's book its value are just those that make it decidedly unsuitable for being boiled down into a Science and Art Department handbook. It is not sufficiently regular in plan for this purpose, and the parts which would naturally appear in an abstract are not those which give the book its distinctive character. Part of it is occupied with the laws of style in such matters as the decoration of walls, floors, and ceilings, and with discussions of the particular employment for industrial and decorative purposes to which different materials lend themselves. In these matters SEMPER makes little pretence of originality. He quotes largely from REDGRAVE, and continually laments his want of practical acquaintance with the specific qualities and technical handling of various

materials. Mr. STANNUS might be safely trusted to produce a more complete and useful treatise on the principles of decoration than that incorporated in SEMPER's "Style."

It is in the other portions of his work, where he takes a wider range, that we get at SEMPER's mind; and these portions, more philosophic and more subtle, would be likely to escape in the process of condensation. One great interest of SEMPER's treatment of his subject is its thorough accordance with the modern scientific method. He never rests in a fact of art history as it stands, as does his contemporary and rival theorist KARL BOETTICHER, but eagerly follows it backward to its origin. Development is to him the key to artistic history; and though he is as convinced as the author of the "*Tektonik der Hellenen*," himself of the supremacy of the Greeks in matters of style, he derives the forms they used from the arts of earlier peoples. This does not in any way tend to lessen the artistic achievement of the Greeks. It is now clearly seen that in no sphere, except perhaps the political, were they great originators. They were form-givers. Receiving art, religion, letters, science from the East, they fixed upon each alike a distinctively Hellenic stamp and made it entirely their own. The Doric temple, BOETTICHER and SEMPER would agree, is distinctively a Hellenic production; but while the former regards it as having sprung forth complete, "like ATHENE from the head of ZEUS," a stone building and a Greek building from the first, the latter, in a more scientific spirit, traces back its origin to wooden structures clothed with draperies and colouring, and associates it with the architecture of other ancient peoples.

In accordance with this view of development, SEMPER derives the monumental architecture of the ancients from festal structures of a temporary kind, and in so doing sets the art in a new light. Architecture no longer has a servile element; it no longer must be held to begin in structures for use or for protection, but in its position as a fine art it is from the first an art of expression, the outcome of religious or patriotic enthusiasm. "The festal apparatus," writes SEMPER, "the improvised framework or scaffolding, adorned and set out with all the accessories and the pomp which signify the character of the occasion and increase the glory of the festival, decked with rich hangings, entwined with boughs and flowers, with festoons and garlands, ornamented with fluttering streamers and trophies—this is the motive of the permanent monument, the object of which is to hand down to future generations the record of the solemn celebration and of the event which it commemorated."

SEMPER does not systematically develop his theory, but returns to it again and again throughout his work. On the strength of it he enforces the view, which is now the prevailing one, that the peripteral form of the Greek temple, as a monumental canopy over the shrine, is the original form of it, and that the old Vitruvian theory of the gradual enlargement of its plan from the temple in antis, the *prostylos*, &c., is untenable. On this conception of architecture, too, he bases his famous "*Bekleidungsprinzip*," or the principle of encrusting or clothing a common material with one more beautiful and costly, as, for example, stones with metal plates or with stucco and painting, wood with metal or terra-cotta, or brick with the marble slabs which have been in use in Italy from the close of the Roman Republic to the recent completion of the façade of Sta. Maria dei Fiori. It is a pity that he died too soon to learn that the Greeks sometimes carried this principle so far as to clothe with plates of terra-cotta the solid stone of their Doric cornices! The origin of all these processes he finds in the covering of the posts and boards of the festal structure with rich draperies and garlands.

A large part, however, of the interest of this theory of the derivation of monumental architecture resides in its bearing upon the philosophy of art in general. To many people it would seem to give art a new character; to be, in short, a paradox. As one of the speakers in the recent discussion at the Royal Institute of British Architects expressed it, it is somewhat of a shock to find that what had been looked upon as "real truth" is "real sham." We must, however, look a little deeper than the apparent paradox. Do we not need in this country to modify a little our current views as to "truth" in art? The influence of WORDSWORTH's poems and prose, and of later and still more eloquent utterances, has brought about a sort of association between "truth to nature" in art and moral uprightness and humility. It has come to be believed in some quarters that the mere close copying of



natural detail in pre-Raphaelite fashion is a moral service, reverence paid to the divinity of nature, and the like. The artist must deal with us truthfully, just as the tradesman must sell unadulterated goods, and architecture, which is not the same inside as out, is in a reprobate style. Through all these notions of his enemies the "Æsthetiker," the "Roman-tiker," and the "Symboliker," SEMPER, armed with his "principle of covering," hewed his way. It was nothing to him that a work of art answered to austere moral requirements. He felt no more rapture at seeing the whole structure of a Gothic building revealing itself to the eye, than if he had been shown a man who wore his ribs outside his waistcoat. This robust view of art, expressed in language of a rugged eloquence, is given in the following note on page 216 of the second edition of "Der Stil":—

I say that the processes of clothing and of masking are every whit as old as human civilisation, and delight in them is precisely the same thing as delight in all that makes men sculptors, painters, architects, poets, musicians, dramatists—or, in a word, artists. Every artistic effort on the one side, every artistic delight on the other, implies a certain spirit of revel; and, to use a modern expression, the smoke of the Carnival taper is the true atmosphere of art. The annulling of reality, of the *material*—this is essential wherever it is intended that the *form* shall stand forth as the pregnant symbol, the independent creation of the human spirit. We must make forgotten the means which have to be used for the production of the artistic impression, and not blurt them out where they are not needed, and miserably mistake our rôle. To this principle the natural man is led by his unsophisticated feeling in all early artistic attempts. To this again return the great, true masters of art in all her departments, only that these in the time of the highest development of art *mask even the material of their masks*. This it was that led Pheidias to his treatment of the two subjects in the tympana of the Parthenon. It is clear that he conceived of his theme—the double myth he had to represent and the divinities which appeared to play their parts in the story—as a material to be treated just like the stone out of which they were made. And this material he sought as much as possible to conceal; that is to say, he freed the divinities from every sort of material outward sign of their unrepresentable religious nature. In that way his gods come before us; they rouse our enthusiasm both singly and in their connection, before everything else, as expressions of the purely human Beautiful and Good. What's Hecuba to him?

For the same reasons, the drama can only have importance at the beginning and at the highest pitch of the developed civilisation of a people. The oldest vase pictures give us ideas of the early materially-masked plays of the Greeks. In a transfigured form, like that stone drama of Pheidias, do Æschylus, Sophocles, Euripides, and at the same time Aristophanes and the older comedians take up again the primeval masked play, and the proscenium becomes the framing of the picture of a mighty piece of the history of humanity, which has indeed never been acted in reality, but which is for ever recurring, and will recur so long as human hearts beat. What's Hecuba to him? The revel of the mask breathes through Shakespeare's dramas. Revel and smoke of taper, the spirit of the Carnival—and this is indeed not always joyous—meets us in Mozart's "Don Juan;" for music too needs this annullment of reality in form, and to the musician, too, Hecuba is nothing, or should be nothing.

But it boots little to wear a mask where behind the mask things are not right, or where the mask is useless. Before that the material (of which we cannot get rid) can be in the sense in which we are speaking *annulled in the artistic representation*, it is necessary first above all things that it should be completely mastered. Only perfect technical finish, well-understood and correct handling of the material according to its qualities, and, above all, a constant reference to these last in the process of giving the artistic form can make the material forgotten, can emancipate from it entirely the artistic representation, can in a word elevate a simple study of nature to the rank of a lofty work of art.

This is strong meat, and some who seek for inspiration where WORDSWORTH found it may not relish it. It is only, however, a strong expression of a truth, which, on consideration, all must recognise—that before art can be, nature must be recreated by human thought. Those to whom the "primrose by the river's brim" is more than a mere "yellow primrose" have made it what it is by their own thought. From this to the "Birds" of ARISTOPHANES or to "Faust," there is only a question of the *degree* to which the human imagination transforms nature. And is there really this antithesis between nature and human thought? SEMPER's paradox is made plain by a greater than SEMPER, one who, true to the bent of his genius, brings to light a profound philosophic truth through a conversation between an old man and a girl at a country

festival. PERDITA will not have "streaked gilly-flowers" in her garden because—

There is an art, which, in their piedness, shares  
With great creating nature.

And POLIXENES answers in words which contain in brief the whole theory of art—

Say there be;  
Yet nature is made better by no mean,  
But nature makes that mean: so, o'er that art,  
Which you say adds to nature, is an art  
That nature makes. You see, sweet maid, we marry  
A gentler scion to the wildest stock;  
And make conceive a bark of baser kind  
By bud of nobler race: this is an art  
Which does mend nature—change it rather: but  
The art itself is nature.

PERDITA yields to the argument, and answers, "So it is." POLIXENES presses his advantage:—Then make your garden rich in gilly-flowers. But here PERDITA turns the tables on the philosopher by enunciating a principle still more fundamental in art than his:—

I'll not put  
The dibble in earth to set one slip of them.

This delightful assertion of the freedom of individual taste is after all the only outcome of the wise artistic discussion. And as this will certainly prevail now as ever, notwithstanding all our convincing arguments, we may leave SEMPER and the Mediaevalists to fight their battles as long as they will.

## THE ARCHITECTURAL ASSOCIATION.

THE fifth ordinary meeting of the Association was held on Friday evening, the 19th inst., Mr. Cole A. Adams, president, in the chair.

The following gentlemen were elected members:—Messrs. C. A. Callon, F. W. Foster, A. Evans, Howard Joseland, C. Torry, W. Fenner, H. Helsdon, F. R. G. Wills, A. E. Tiller, C. G. Bousfield, W. Hoe, J. R. Rhind, and P. P. Carey.

Mr. Lawrence Harvey was elected a member by acclamation, on the proposition of the President.

Mr. W. H. AITKIN BERRY, hon. secretary, said that it had been thought desirable to print an extract from the report of Mr. George Aitchison, A.R.A., on the work submitted in competition for the prize in the Class of Colour Decoration, 1884, as it contained some valuable remarks. Some copies were still left, and members wishing to have a copy could apply to the Secretaries at the close of the meeting.

Mr. W. H. WHITE then read a paper, as follows:—

### The Antechamber, to-day and yesterday, in French and English Plans.

I believe it to be generally admitted by editors, publishers, and booksellers that a great many more papers would be written, published, and offered for sale than actually happens to be the case were the supply of subjects for dissertation more plentiful than it is. I am told that there are even gentlemen living—members of our profession—who have early in a session undertaken to read nameless papers before societies, like ours in the hope that a subject to write about may, as a matter of necessity, occur to them before the day of execution arrives. But in my case I determined upon a subject, and invented a title, before ascertaining whether there was much or indeed anything to write thereon. That title runs smoothly enough: "The Antechamber, to-day and yesterday, in French and English Plans;" and if you hold me to it, without mercy, my task will be soon accomplished, for an antechamber is merely the *amphithalamos* of Vitruvius's Grecian house, and in both the French and English distribution of a dwelling-house is that piece which is *ante* to a bed-chamber. Permit me therefore to play upon my title with just that license accorded to those earnest expounders of inspired sentences who admonish us twice on Sundays. Let me divide the text into three parts, and put my subject, Cerberus-like, under three heads, in which the ante-room shall be treated literally, colloquially, and then broadly and generally in the architectural sense of *vestibulum* and *abium*. But before plunging into space, I want a beginning—a something to connect the subject with current topics—and I am reminded that the country is at present in the full enjoyment of a centenary; that this day one hundred years ago, less a few hours, a great English lexicographer was buried in Westminster Abbey amidst the respect and gratitude of the nation; and so, as in writing a paper or a poem, there is "nothing so difficult as a beginning . . . unless perhaps the end," I will begin at once, and with another quotation.

"Seven years, my lord, have now passed since I waited in you



outward rooms, or was repulsed from your door." Surely not the very youngest member of this excellent Association ignores the incident which served to put those words into a letter addressed by Dr. Johnson to the fourth Earl of Chesterfield. The scene has been depicted by artists, has been mentally portrayed by thousands of James Boswell's readers, without, perhaps, a thought of the house in which the event happened. Indeed, it was only a few weeks ago that I asked myself whether the house at the end of Stanhope Street, Mayfair, was really that in which Dr. Johnson "did antechamber," or that I doubted whether the outward rooms of a peer in the days of George II. could be other than stately pieces. Have we not all seen pictures of a vast antechamber or vestibule crowded with aspirants more or less motley, with the gloomy doctor seated uneasily, leaning on a clumsy stick, and frowning at Lord Chesterfield's back, after he had passed with a troop of friends, and paid no heed to clients anxiously searching for a patron? But, gentlemen, on the wall is a plan of Chesterfield House, taken from the "*Vitruvius Britannicus*" (ed. 1767, vol. iv., plates 67, 68, 69), and there at the door you will see very little room for an assemblage such as I have described. A hall chair and table, two or three flunkies, and my lord's gracious presence, would have effectually blocked that entrance passage, which merely forms part of the principal staircase to the house itself. There is nothing in that Mayfair residence of an English nobleman which fulfils the idea of an antechamber such as Charles II. brought to Whitehall from France, such as, two hundred years ago, Italian and French architects made an important feature in their distribution of rooms, in a house or a palace, or such as, one hundred and thirty years ago, J. F. Blondel discoursed of in Paris, to the students of his school of arts, a short time before he became a professor of the Royal Academy of Architecture.

The antechamber is famous in history, and, perhaps more than any other part of a house, its existence has helped to make history. Mackintosh and Macaulay repeatedly use the term, which to Fielding and Addison was familiar, and Dr. Johnson has warned us that it should be spelt with an *e*, not an *i*, as the Dictionary of the French Academy still has it. Gibbon has much to tell of the Roman antechambers, and Cicero of the clients who waited in them. The ancient fashion of waiting in the early morning at a great man's door to attend his levee, or, in the vernacular, his getting-up, has survived even to the present day in Paris. In the age of Louis XIV. it formed a part of the stately manner, as it is possible to picture it from the stately phraseology of the time. If Pliny left home before sunrise to pay his respects to Vespasian, there were historians in the antechamber of Louis hours before the eyes of his most Christian Majesty were opened; and, during the Second Empire, a well-known Minister of Napoleon III. received people of business at half-past seven in the morning in his dressing-room, which served as an antechamber. Indeed, the custom of early visiting on matters of business is very general among Parisians, the mass of whom are at work an hour after daybreak. If you had business with Viollet-le-Duc it was necessary to call on him before nine a.m., and I have found his library full of different kinds of visitors at eight o'clock. In this country the levee,\* which, as a formal homage to the sovereign, is identical with classical precedents, takes place in the afternoon, and therefore, as far as the meaning of the word goes, is a misnomer. In the time of the Louis's there was the great and the petty "getting-up in the morning," and the pictures of such events extant are curiously interesting—for the bed-chamber of the last century and of the one previous to it rather resembled a modern drawing-room than a bedroom as we understand it now, and the antechamber which led into it was usually a luxuriously furnished apartment, preceded often by a smaller room called the first antechamber, in which the servants waited.

There is nothing supremely elevating in the subject of an antechamber, or of the conversation likely to have taken place there; but those who read French well enough to enjoy the splendid literature with which the architects of the Bourbon dynasty have endowed the noble profession to which it is your privilege, and mine, to belong, will agree with me in admiring the rounded sentences of François Blondel when he submitted himself to Louis the Great, and those of Desgodetz when he approached Colbert. Be sure that these men, whom you no doubt regard as old classic fogies, extinct like the dodo, did antechamber in the grand fashion, of which we in England have little idea. In this country the spirit of the Renaissance was never imbibed as it was by the French of the sixteenth century, and this was probably due to the disturbed condition of home politics at the time, though the national character may have contributed to render obeisance less facile to Englishmen than it was in France. Indeed, Horace was often less fulsome in his prostrations to Caesar and Mæcenæ than were some of the French philosophers and poets of the great age to princes and nobles. To do antechamber then was the pro-

vince of persons who aspired to live by literature or art, and it was only towards the close of the last century that emancipation from such unworthy thralldom was effected. It is pleasant to remember that, years before his death, Voltaire held the position of a patron rather than a client; and in England Prior was an ambassador, Addison a Secretary of State, while the most conspicuous figure in English politics in the reign of our dead but ever-gracious idol Queen Anne—I mean Lord Bolingbroke—was friend and jolly good fellow with the three Yahoos of Twickenham—Swift, Pope, and Gay.

It is pleasant, moreover, to read J. F. Blondel, and the architect, Patte, his editor, when they discourse on the antechamber, especially because both had a great deal to do with the development of home comforts in so far as they depend upon the arrangement of a dwelling-house. In their time the proper position of an antechamber was more important than the direction or turn of a corridor is in ours. J. F. Blondel, in his "*Cours*," complains of "our young architects," your *confrères*, gentlemen, who competed for the Prize of Rome, and took the first place among architects in most of the European capitals and great cities—those young architects who constantly forgot that a first antechamber was required in good houses to precede the antechamber which was often used as a dining-room—and thus got found out for being what it always was: a mere passage-way from one part of the building to another. The fact is that most châteaux, at the beginning of the Renaissance, were merely long narrow blocks of building divided crossways into rooms, one of which, selected here and there, was an antechamber. You had to pass, in going over such a building, from or through one room to another; and the antechamber, like the hall of ancient times, was an apartment common to every one, in which most of the servants spent the day and some the night. The doors of several rooms opened into it, and thus it was like the saloon of a ship—which is used as a breakfast, dining, and tea room—surrounded by rows of private cabins.

Herein was the defect that Patte and Blondel stigmatised, visible in all the plans of the last century, and not completely remedied even at the beginning of this. If you want to judge of this defect in its most exaggerated form—of the sort of confusion engendered by such planning—you have only to stay a night or so at an inn, say in the Pyrenees, or some part of the country distant from any of the great centres of French life. In such places you may by chance get a bed allotted to you in a spacious though irregular room, which you may find full of doors. Englishman-like, you will try and lock those doors, but it is a dangerous practice, for often every one of them leads into another apartment, and in your haste to be secure from intrusion you may lock up a priest or a bagman—even a widow or a maid—to your own regret, and, possibly, their indignation. The careful manner in which we nowadays plan houses, both for town and country, so as to allow communication between every part of the building without necessarily passing through any of the various rooms, is an advance upon the earlier practice; and, further, the very improvements which Voltaire commended, as having been made since the reign of Henry IV.—which Patte signalled as having being perfected in his own time—would be regarded now as fatal blots in an ordinary residence. The stride of this century in that, quite as much as in other more remarkable things, has been gigantic, and it would be affectation in any one who appreciates what he reads, and who does not lose his head in the contemplation of the picturesque, to doubt or deny our manifest progress in the arrangement of dwelling-houses. But in our successful efforts to improve, we have improved the antechamber from off the face of our world altogether. In place of it we get a narrow corridor, with here and there a lobby, and, content with such improvement which has economy in its favour, the uses and advantages of an antechamber have become obsolete—at least, in England. Yet it served a great purpose in the old châteaux of Europe, and may still be seen in many that have not undergone alteration. To quote from a paper of my own, written a few years ago, an enormous antechamber often formed the sole entrance to a set of private apartments; it was a lofty room with a fireplace and large windows. The door to my lord's rooms was on one side, the door to those of my lady was on another. The bedrooms were used as living-rooms on ordinary occasions; only on extraordinary occasions were the great reception-rooms and the great dining-rooms used. In the descriptions extant of Versailles and Whitehall it is the antechamber in which courtiers met, and of which the most frequent mention is made; and I cannot refrain from urging those who are planning the now fashionable houses-in-flats to study some of these old French buildings, for there is a great deal in them which may be advantageously applied to the horizontal principle of house distribution, both as regards practical requirement and as regards artistic effect.

Take, for instance, a famous plan of a private house, designed and erected by J. F. Blondel, and published in his "*Cours*" for the purpose of showing students how to plan profitably upon a narrow and irregular site. Here is to be seen the antechamber as it was understood at the beginning of the last century, and the care with which he has managed to give an architectural shape to the room, in spite of more than one acute angle, is worthy of

\* Macaulay, writing of the "State of England in 1685," says:—"Hardly any gentleman had any difficulty in making his way to the royal presence. The levee was exactly what the word imports. Some men of quality came every morning to stand round their master, to chat with him while his wig was combed and his cravat tied, and to accompany him in his early walk through the park."



notice. Here, again, is a cheap block of flats built some years ago in Paris as a speculation, intended to pay its proprietor a good annual income. The block contains shops at the street level, and five residences on each storey, reached by three staircases; they are arranged for very ordinary people belonging to the middle class, and who are content to live, so to speak, on the Surrey side of the river, at a considerable distance from the Place de la Concorde. Every attention has been given to make the private entrance to each flat useful and agreeable. An entrance like that shown on the plan bears the name of "antichambre," and I venture to think that such a well-considered arrangement as the plan before you, the work of M. Bonenfant, for a mere middle-class block of residences of comparatively low rentals, forms a pleasing contrast to the higgledy-piggledy jumble of shapeless rooms which is now known to Londoners, and joyfully accepted by them, as an orthodox flat. I need not stop to reflect upon the kind of bonfire many of these London blocks would make were it kindled in the basement; for that is rather an affair for statesmen and speculators to treat of, after a catastrophe: my purpose is to point to the uncomfortable and inartistic character of these new-fashioned residences, no portion of which is uglier or more carelessly treated than the hall or antechamber. I live in a flat myself, and appeal to our young architects, with some degree of personal feeling, against the kind of thing to which I have to submit. My door opening inwards is 3 feet wide. Observe that the person opening the door from the inside must take refuge behind it, while the visitor entering from the outside strikes his nose against the wall in front of him. Flats with entrances like this, and containing seven, nine, and even eleven rooms, are letting easily for 120%, 140%, and 160% per annum, in neighbourhoods distant half an hour's walk from Piccadilly Circus.

Perhaps I may be allowed to refer to the fact of my having, in 1875, described to this Association "How the Parisians build a House in Flats." The paper was a fancy picture sketched at different times and from several examples: I made a further communication in 1878 to the Institute on "Middle-class Houses in Paris and London," and had I dared to say then that houses such as I portrayed—not altogether similar to those erected twenty years ago in Victoria Street—were almost immediately to cover whole streets in London and New York, the statement would have been regarded as the dream of an enthusiast. But the thing has happened, and I have a sequel to add which may be called a further dream. I want to see flat residences planned for central London, with three antechambers in each. An article written by me in 1878 contains twenty-four rules for planning and erecting such buildings. In the eighteenth rule it is laid down that "each residence be subdivided into three parts: one for day habitation, one for night habitation, and the third for the service." To those rules which I then formulated I would now go further, and add that "each subdivision have an antechamber proper to it." Thus the antechamber to the day division would be the entrance-hall, and perhaps during the dinner-hour the serving-room; the antechamber to the bedroom division might contain a linen-press, a female servant might sit there at work, and it would be common to the womankind of the household; the antechamber to the service division might be the servants' hall, and form a salubrious break between kitchen, scullery, &c., and the other portions of the residence. Of course I am not thinking of blocks of building like the French example I have shown, for so elaborate a scheme of distribution as that combining three antechambers; but I am convinced that if young architects who are working out the plans of flat residences will banish from their minds the modern idea of a passage, and try to realise the idea of two centuries ago—namely, that of the antechamber—they will attain to a principle of distribution more in harmony with the character of the problem to be solved than has yet been adopted by even experts in our art. By such a subdivision as that I have advocated, families may be properly accommodated in horizontal houses; but if the present mode of arranging these monuments of successful speculation be permitted to develop, the fashionable house-in-flats may become as fruitful a hotbed of disease, consequent upon overcrowding and want of air, as the worst slums of Marylebone or Soho.

Now, having treated the subject of the antechamber in a literal and in a colloquial sense, I will proceed, with your permission, to take an extended view of it, for we are now in the third and last phase of illumination as regards the text of this discourse.

Come back, then, for an instant to a state of primitive existence, and I feel sure that my friend Mr. Lawrence Harvey will afterwards assist me in unravelling the by-no-means tangled web of evolution. Horace sang of a simple enclosure containing a hearth or fire, around which lay the inmates—men, women, children, and slaves—while the smoke ascended through an issue in a roof of turf. That was the atrium, indeed the dwelling-house of Romans in the good old times, and it had a door but no windows. The client who waited upon his patron waited outside the door, and probably squatted there as natives of India do now in the verandah or the compound (campagna). But as the community developed, the atrium increased in size and character; the open area or vestibulum outside the atrium door got a roof put to it; and horse, cart, and chariot were protected from the weather. The hole in the

roof of the old atrium developed also, and as the *cavum adium* took architectural shape a receptacle was provided for the falling rain, which no longer served to damp the open hearth, but fell only to replenish a piece of water cunningly contrived in the midst of an antechamber common to all the members of a household, to the stranger within its gates, and to the slaves, though rarely entered by the Roman matron and her spinsters, who occupied a reserved part of the improved dwelling-house. All this becomes easy to realise when you have once visited a Pompeian house; and, depend upon it, the great mass of Grecian and Roman houses of the Augustan period were not very different from those that still exist, thanks to Vesuvius, on the Neapolitan shore.

In similar progression the Mediæval hall ultimately took the shape discovered by archaeologists. The hall of the twelfth century was a covered enclosure, strewn with rushes; dogs and horses, as well as men, women, and children, were sheltered within it. A fire was kindled in the centre for cooking purposes rather than for warmth; and if there be no absolute evidence of a hole having existed in the roof of such a hall, you may be sure that the lantern of a later period was only a logical refinement of it. Further, as manners improved, a part of the hall was reserved for the master and his family. Hence the dais or raised platform of wood, which afterwards got boarded in, and developed into the private chamber, the retreat of the lady of the household, the thalamos of Mediæval purity. Just as the vestibulum and peristylum developed in front and back of the primitive atrium, so chamber and antechamber grew naturally within the Mediæval aula or hall, and, to realise the process, you have only to live on shipboard for a short time. When you have watched, say in the Red Sea, a sailcloth rigged up across a portion of a vessel's deck, to shelter a group of ladies or some sick passenger, you can at once comprehend the slow method of development that culminated before the sixteenth century in the châteaux, palaces, and houses, with which our young architects of to-day are fatally familiar.

But to the people that read Dr. Perrault's translation of Vitruvius, to the great noblemen and great scholars who contributed to the magnificence of Louis XIV., the domestic works of the ancients were so many enchanted palaces, about which any extravagance would be believed possible, and to which any scale might be fearlessly applied. Perrault, with the mangled text of Vitruvius before him, designed a Roman dwelling-house of colossal dimensions, with area, vestibula, atria, cavaedia, forming the, so to speak, public part of the house, with peristylia and a host of rooms of every description forming the private portion. The Grecian house devised in the same fashion measures 350 feet in depth by 275 feet in frontage, that being, as you probably know, about 150 feet longer and 175 feet wider than the Parthenon measured at its topmost step. In the "Travels of the young Anarcharsis," written by the Abbé Barthelemy more than a hundred years afterwards, the plan of a Grecian house shows a thalamos measuring 32 feet by 25 feet, and an amphithalamos of similar shape and size, and the whole conception of the building is much more extensive than that of Perrault. Nearer our own time, Dézobry, who wrote a novel called "Rome in the age of Augustus," and Mazois, who wrote another novel in which he described the Palace of Scarus, imagined colossal edifices covering vast spaces sufficient to contain a Paris place or a London square. No wonder, then, that if scholars and experts lost their heads and continued losing them until nearly the middle of the present century, the princes and seigneurs of the Great Age took an exalted view of the images which the spirit of the time had set up, and accepted every estimate of classical magnificence provided only that it was big enough. Hence the Château de Richelieu rose like a small town, and all over France the great landowners reared quadrangles of constructions, with outer and inner courtyards and annexes; erected chapels, sometimes theatres, and combined within their own walls all the refinements, and indeed all the civilisation, of their time. This went on in France all through the seventeenth century, but the fashion was not general in England until the eighteenth. On the wall is a rough plan of Blenheim Palace, which was designed by Sir John Vanbrugh, and erected at the beginning of the eighteenth century; but the drawing shows only the principal buildings. Half a mile off on every side the country was mapped out to lead up to the palace. Avenues of trees, lakes and waterfalls, parterres, terraces one above another, perrons and flights of steps, astonished and confounded the spectator from any one of the hundred windows of the palace fronts. To misinterpret Pope, it was the architect's ambition of that day—

Jones and Palladio to themselves restore,  
And be whate'er Vitruvius was before.

Of all the marvels produced either in France or England in the last century perhaps the most beautiful as far as plan goes was the Château de Marly, which was pulled down by order of the first French Republic. On the table is a monography of this great and almost last work of J. H. Mansard, in which you will find many beautiful points to observe, but also very much to avoid. The sole excuse for these extravagances lay in the assumption that the glories of Athens and Rome were being successfully emulated in the architectural monuments of the day. Pope, how-



ever, saw the absurd aspect of this kind of bombastic revival, and satirised it in his epistle to the Earl of Burlington, wherein Cannons, the estate of Lord Chandos, is alluded to as Timon's Villa :—

Greatness with Timon dwells in such a draught  
As brings all Brobdingnag before your thought.

Who but must laugh, the master when he sees,  
A puny insect, shivering at a breeze !

My lord advances with majestic mien,  
Smit with the mighty pleasure to be seen ;  
But soft—by regular approach—not yet—  
First through the length of yon hot terrace sweat ;  
And when up ten steep slopes you've dragged your thighs,  
Just at his study-door he'll bless your eyes.

Before this was written Swift had caricatured with equal force the fashion of the day in literature. As terraces, vestibules, and antechambers had to be traversed before reaching my lord's presence, so books had their dedications, introductions, and prefaces. In "The Tale of a Tub," Swift begins with the author's apology, followed by a postscript ; then comes a dedication to the Lord Somers, with a word from the bookseller to the reader, after which a dedication to Prince Posterity precedes the preface, while the matter of the book itself is almost lost in an introduction and a conclusion of considerable length. The satire was deserved, and the commencement of the end of the grand epoch was thus announced. How the minds of men were affected by the "grand" and the "stately" in an age of courtesy and compliment, how they were guided in their appreciation of the works which served as its models, and ignored the Mediæval architecture of Western Europe, may be seen in Addison's description of the different effect produced by the contemplation of an ancient and a Mediæval building. "Let anyone reflect," he wrote in the *Spectator* (No. 415), "on the disposition of mind he finds in himself at his first entrance into the Pantheon at Rome, and how his imagination is filled with something great and amazing, and at the same time consider how little, in proportion, he is affected with the inside of a Gothic cathedral, though it be five times larger than the other, which can arise from nothing else but the greatness of the manner in the one and the meanness in the other."

But we have changed all that, and more than one British student of architecture has asked himself, when outside the Pantheon, whether the precious time of a tourist in search of the picturesque might be profitably wasted by stepping inside. This same tourist, in his passage through French and Italian cities, may yet regard the great *portes cochères* of ordinary houses, the spacious courtyards of private residences, as so much space to be built upon, which his own more acute compatriots would long ago have converted into a solid mass of offices or dwellings. He may yet wonder why palaces of justice, Government and municipal offices, possess vast halls or *salles des pas perdus*, always open to the public, and often full of people, seeing that in his own more favoured country, the birth-place of popular liberty and of common sense, the home of practical men, there are none of such things ; and year after year it becomes more and more patent that such things can be dispensed with, and, indeed, are the mere vagaries of an exploded theory or the outcome of affectation, which is profitable solely to the architect, as the one person interested in making what he may call a fine building. But neither in France nor Belgium, neither in Germany nor in Italy, do governments think or act thus. There, no portions of a public work are more carefully considered, or more spacious, than the portions open to the people, and devoted to their use. How such works are understood in France, what the character of ideas which guide the architects who devise them is, may be seen in some of the selected designs for the Prize of Rome, photographs of which are hanging on the wall. There is actually a palace of justice among them, the architect of which has conceived not only the desirability of a magnificent vestibule, but also a public hall giving access, on each of its three sides, to a court of law. Nor are these designs the chimeras of irresponsible youth. Many of them, matured and perhaps reduced in dimensions, are afterwards worked into practical shape ; they form parts of monumental buildings, paid for by the nation, and worthy of it—the very antithesis of that British notion of compactness which may yet culminate in placing the hall-porter of our proposed new Government offices in a box on the street pavement, when it shall be seen, too late, that the spirit of false economy and speculative adventure which inspires the action of modern Ministers has added a fresh architectural calamity to the list of their irretrievable disasters.

Now, what have we got in the place of the "grand" method of our fathers ? In lieu of a courtyard we have a low doorway opening upon the public street ; in lieu of a vestibule, of an antechamber, we get a vaulted corridor, which, in more than one instance I can name, has an entrance-door at one extremity and a darkened window at the other. Let us, then, inquire how this change has come about?—how men's minds have been led to accept the present haphazard fashion of planning new buildings, and the utter absence of any wish or attempt to compose them ?

That the course of revival during the present century has been

largely affected by literature of the romantic sort it is unnecessary to do more than note. That it entered upon a new phase after the attacks of Pope, and the wits that he inspired, has been explained over and over again. The Gothic cathedral, the fortress converted into a signorial residence, the bishop's palace, the manse, the grange, or what not of Mediæval origin and descent, when they first attracted the archæologist, were made up of the work of different and successive epochs. A hall erected in one century had its window openings doubled in size in the next ; fifty years afterwards a clerestory may have been added. The low porch, or the low arches of a cloister erected in the thirteenth century may have been partly pulled down and rebuilt in the fourteenth century with more sharply-pointed arches, and filled in with tracery. What met men's eyes when they first began to see the beauty, and perhaps the grandeur in Gothic work to which Addison was blind, was a something eminently picturesque—a something that retained its beauty under grey skies, could do without sunshine, enjoyed a monopoly of gloom which served for shadow, and possessed, in its dilapidated, ivy-clad condition, all the charming properties of a sketch and few of the prosaic, necessary fittings or fixtures of the finished building. All over the country were to be found works of this kind ; in many notable instances they were the heritage of noble families, of squires, and county people, whose reigning head might have pleaded, though he rarely did so, that the dilapidations of his ancestral home were typical of long descent and early connection with the soil. Then inquiry bred inquiry, archæologists mustered, architects learned to reproduce such houses. Rich men who were not proud of their ancestors, and even had reasons for not alluding to them, jumped to find that money could purchase and architects could provide country seats as varied in age and as old in appearance as any ancestral home in the island. If the plan was irregular, if portions of the new erection had a tumble-down look, if the principal entrance was low and a little out of the centre, if it led to the back instead of the front part of the house, the illusion was all the more agreeable and complete. Architecture thus conferred gentility, and no complication of hall or passage was too irregular, no grouping of parts too illogical to subdue the owner's proud reflection that his new house was of the very oldest and most historical in style. So, after all, the immediate outcome of archæological science, whether it revive the ancient works of Athens and Rome or the Mediæval creations of Western Europe, is affectation, and not very dissimilar to-day from that of the great epoch of Louis XIV. and his successor. The Timon of Pope was pleased to create, often on a barren soil, something entirely new ; the Timon of to-day aspires equally to create, but in fertile glades, something supremely old ; and, as we are now considerate enough to deprecate with a smile the affectation of a Bathurst or a Boyle, so may posterity review kindly our present triumphs of architectural skill, which will, I fear, baffle, ere the next century be finished, all the wit of Birmingham, all the learning of Leeds.

Frankly, I feel that too much of the old grand manner—not to be confounded with the "grand old" manner—of the stately method of composition in architectural planning has been discarded, and that a too great regard for the picturesque at any price now tends to deprive a public building erected in this country of the oneness and harmonious disposition of parts which belong to the monumental erections of Paris, Vienna, and Berlin. I am not so Quixotic as to suppose that every building can be made to tell its proper tale, but I do most certainly think that our present method of grouping a congeries of buildings, with innumerable entrances, small and confined vestibules, all to do duty as parts of a public office, a town hall, or a palace of justice, is fatal to popular convenience and destructive of private comfort. In all such buildings there should be not only an entrance, well and conspicuously marked, but a central hall in which the stranger or the visitor may obtain information to guide him in his search for a particular office or a particular court. The architect can only by such an arrangement afford the means of making his building intelligible and facile to those who use it. But whether by the fault of others who pretend to instruct him, or from his own desire to be quaint and picturesque, many of the newest public buildings in this country fail in just those points—in the arrangement of those parts of a great building which should be common to the public—upon which the architects of the two last centuries lavished their skill, displaying therein a by-no-means contemptible acquaintance with ancient learning, which they used to the profit of the arts and manners of their time.

The PRESIDENT, alluding to the introductory remarks of Mr. White's paper, said that, looking at the paper simply in connection with anterooms, there was little to be said about the anteroom ; but that those who had followed Mr. White's meaning would have deduced from it that the Gothic revival had tended towards picturesqueness of effect rather than that balance and proportion of parts that distinguished the Classic period. In this respect the Classic school contained a useful lesson. In the present school of architecture, as exemplified by Mr. Norman Shaw and others, the tendency was towards making the hall the antechamber, and those who had studied the designs in the professional press would have noticed the hall as an important feature, as furnished, as serving as



a reception-room, having the other rooms grouped about it, and the staircase probably leading from it. There was no question that architects could design it, but too often the question of cost intervened, a question that staggered many an aspirant for fame. The President instanced the design of the Albert flats, where the visitor entered straight from the door into a square hall or reception-room, which gave access to the rooms of the flat.

Mr. LAWRENCE HARVEY said that a gentleman who had made much money by the practice of architecture had objected to the French definition of architecture, viz., *décoration construite*, and defined it instead as construction decorated. For the Frenchman architecture was to be art work for its own sake, while for the architect of Blenheim House it was to be the means of showing how great a man the owner was. If you took a picture out of its frame only a connoisseur would stop to examine it. Vanbrugh's idea was to give dignity to his client by surrounding him with masses of stone, and by letting it be seen that his client had in his mansion a chapel, grand kitchen, servants' hall, &c., and stabling. Good architecture consisted in giving a client everything that was necessary for him, and in giving a clear expression on the outside of the internal arrangements. In this respect he thought the Goth had a more correct idea of architecture than the Classicist. Vanbrugh, who was a playwright Mr. Harvey likened to M. Garnier, the architect of the Paris opera-house and professor of architecture. Both were fond of grand effects.

Mr. GOTCH proposed a vote of thanks to Mr. White for his paper. Mr. White had mentioned the introduction of the large plans from France in the last century. As matter of fact we had the large rambling style of plan already in the country. Audlem Hall, Cambridgeshire, was an instance of one of these immense structures. The hall now only occupied a quarter of the space originally covered. It originally consisted of a central block and two great courtyards, each of which were simply collections of rooms or lodgings, of no use, and only put up for effect. These were at last removed, so that at the time when the grand buildings Mr. White spoke of were being erected, Audlem Hall was being denuded, was tried and found wanting. The idea of making the hall a sort of sitting-room seemed admirable, and to be a piece of economy desirable to effect, because at present space was much wasted in halls and corridors.

Mr. BLAGROVE seconded the vote. In planning ordinary residences an architect, he said, did not get the opportunity of doing anything with the hall; it was only in large mansions he got scope for that. At Gatton Hall a fine effect was got by carrying the hall up two storeys at least, with glass at the top. As to Mr. Harvey's remarks about Blenheim House, some excuse might be pleaded for its faults because it was a distinctly monumental building, a sort of votive offering to Marlborough. Mr. Blagrove said he had read Vanbrugh's plays, and neither as playwright nor architect did he exhibit inferiority. The architect must not be blamed for the materials that were put at his disposal, and Vanbrugh had, he thought, made a very artistic use of the details in fashion in that day.

Mr. W. HILTON NASH said he felt rather hurt when Mr. Harvey spoke so disparagingly of Vanbrugh. Though he had his defects he had also his merits, and unlike the Italian palaces, built of lath and plaster, Vanbrugh built his palaces of good materials. The antechamber principle might certainly be utilised and made more of without sacrificing space.

Mr. CLARKSON, alluding to Chesterfield House, and the popular belief that Johnson had sat there, which had been controverted by Mr. White, said one hardly liked having to have old ideas ruthlessly knocked away.

Mr. FARROW thought great cost would result from the adoption of two or three antechambers, and that the price of flats would rise enormously. An examination of the illustrations of the German buildings in the Architectural Institute, Vienna, showed the liberality of the Government in granting large spaces of ground for erection of public buildings. The area of the courtyards were quite as large as the area covered by the building itself. When our Government could be got to allow ground on the same liberal scale, architects, he was sure, would give the country really grand buildings.

Mr. SLATER, Mr. STANNUS, and Mr. APPLETON having made some observations, the vote was put by the President, and carried by acclamation.

Mr. WHITE, in responding, said, as to the question of the adaptation of the French grand schemes of plan in this country, that Blenheim House was erected at the very beginning of the last century, and Castle Howard towards the close of the seventeenth century, so that this grand manner of plan came over from France in the latter part of the seventeenth century. Mr. Gotch had been quite right in alluding to the misinterpretation made. As regarded the lath and plaster of Italian palaces and the solid materials of Sir John Vanbrugh, and the epitaph of Sir John referred to by Mr. Nash, the words of Pope or Swift were, "Lie heavy on him, earth, for he laid many a heavy load on thee," but he did not think those words were written on Sir John's tomb. His justification in referring to Chesterfield House was that there was a view of it in Boswell's "Life of Johnson," and he thought there was no doubt that it was the house that Johnson was supposed to

attend. Mr. White pointed out where Johnson would have gone in. He could not have got in, as might be supposed, at the staircase, for there was no space there for the client to wait. As to the cost of three anterooms instead of half a one, his answer was that some owners were making 7 or 7½ on their outlay, others contented themselves with 4 or 3 per cent. Where people would be satisfied with a reasonable return for their outlay, there would be no difficulty in providing these rooms.

## HOLBEIN AND PORTRAIT PAINTING.\*

WHEN the change of feeling swept over Europe, which manifested itself in some countries as the Reformation, and brought with it a trail of peasant wars and political and social developments ramifying to every relation of man and man, the art of Europe everywhere reflected the new tendencies. The old social organisation gave way, and a spirit of independence and individuality went abroad. Guilds of all manner of local and industrial bonds fell to pieces, and the individual was left to fight for himself in the rough and ragged world. A new type of man arose, to whom self-reliance was a virtue of supreme importance. Everywhere, accordingly, the life-springs of ideal art began to dry up. Men no longer required pictures and images of saints and heavenly personages to remind them of the governance and sanctions of their life. They no longer looked far into the invisible world for hourly help, or, if they did, it was to an infinite impersonal impicturable power. It was upon himself in the main that each must rely; of himself he became more and more conscious; hence the age of religious art was succeeded by one of portraiture

### Portraiture.

Already Memling foreshadows the change by the attention he unconsciously devoted to the portrait of the kneeling donor, rather than to the Madonna of his worship; the next century, with its Holbeins, Tintorets, Cranachs, and Dürers, carried the revolution through. The individual in the fulness of his individuality was the sum and substance of all great sixteenth century art. The loan collection contains more than one noteworthy example of the sixteenth century work. The finest is the picture of Lady Guildford, painted by Holbein in the year 1527. Holbein was the son of an indigent though remarkable artist of Augsburg. He learnt the rudiments of his craft from his father, and then went off to the thriving town of Basle, there to make his way for himself. Prosperity came gradually to him, and a reasonable fame followed in its wake. He was brought in contact with eminent men, Erasmus amongst the rest, and so it came to pass that when evil days fell upon Basle, Holbein was able to go to England with warm letters of recommendation to the great Sir Thomas More. He settled down at the Court of Henry VIII., and remained in England most of the years from 1527 to his death of the pest in 1543. During that time he painted the grandest series of portraits that any man has ever as yet produced.

The impression prevailed till comparatively recently that portraiture is a lower branch of art than the painting of subject pictures, or historical pieces, as the critics of the last century used to call them. Now a portrait may be one of two things. It may be a dull and accurate repetition of the lines and modelling of a man's face and costume, such as a photograph can produce with certainty and precision. Or it may be a representation of the man at a chosen moment amongst chosen surroundings. It is only a portrait of this latter character that can be called a work of art, but such a portrait belongs to the very highest range of human productions, and the maker of it attains almost to the divine rank of a creator. There are in every human face two qualities visible to all-seeing eyes. There is first the almost permanent expression of character by which the features have been moulded to their lasting form, the bones shaped, the flesh spread over them, and the wrinkles slowly ploughed in, one by one. As the man advances in years this expression grows more and more pronounced, every fleeting smile and every burdening frown leave behind them a trace which repetition finally renders almost permanent. The first duty of the portrait painter is to master the secret of this look of character, and to set that down plainly and unhesitatingly. Equally important, however, are the fleeting expressions that traverse the face of every man, whose mind is not an absolute blank, marking even in sleep the vagrancies of an errant fancy. Every thought sends its ripple over the surface, even as a fish swimming deep disturbs the level of a placid pool. And for every face there is one kind of expression that most frequently returns, and that acts as the strongest moulding force upon it. The fire of the orator blazes within him when he speaks, and sinks to quiescence when he is silent. The author knits his brow when seated at his desk, and relaxes it in his arm-chair. The merchant is most himself in his office; the labourer following his team along the weary furrow. All manner of men, in fact, must be caught when their minds are fully awake and their intelligence is active. The photographer can never so find them.

\* From a lecture by Mr. W. M. Conway, in connection with the Brighton Loan Collection.



The artist alone, by continued watching, can discover and fasten in a memory, large by nature and cultivated by practice, the fleeting glances and nervous movements of the features and members which mark the peculiar action of an individual mind. Lastly, the portrait painter, having mastered the fixed look of character, and the fleeting accidents of expression most properly belonging to his sitter when all his finest qualities are aroused, must choose for him such harmonious surroundings as are best adapted to the man. One is essentially a man of the open air, a brother of the mountain, the forest, or the brook; another is a man of affairs, a denizen of council-chambers, a manager of men; another is a man of solitude, study, and meditation; another a man of business, and another of pleasure. The surroundings must suit the character, and must be in themselves graceful of form, harmonious in colour, and balanced in grouping of light and shade. Such is the problem of the portrait painter. He must be a perfect artist in all that pertains to his craft; he must have perfect insight, and an unflinching memory. Such a man more nearly than any that ever lived was Hans Holbein, the younger. A secondary, but still an important necessity for a great school of portraiture, is that a number of men should exist in a society worthy of being painted and capable of defraying the necessary expenses. There are great men in every age, but they are not always the men who employ artists. As often as not the great men are hidden, and only the lesser ones float like corks to the surface. In Holbein's day it was, fortunately, otherwise. The courtiers and state-men who served Henry VIII., if not the greatest with which England has been blessed, were yet men of extraordinary calibre. Some of them, such as Sir Thomas More, Holbein's especial patron, were made of the very finest English clay, and fashioned in the noblest mould of the genius of our race. Besides, there were Warhams and Fishers, Colets and Stanleys, Cromwells, and a host of other lights, whilst amongst foreigners such epoch-making men as Erasmus and Melancthon were enough of themselves to make any artist's fame.

#### *Holbein's Picture.*

And now let us turn to Holbein's picture itself, and see how far it exemplifies the qualities thus roughly indicated. It was painted in 1527, the year of Holbein's arrival in England with letters of introduction to Sir Thomas More. The first picture he made was no doubt the portrait of his patron, a work of surpassing excellence, not many years ago shown at one of the London winter exhibitions. In the same year he painted portraits of Archbishop Warham and Bishop Fisher, both of them friends of More, and leaders of the party opposed to Wolsey. To the same party belonged Sir Henry Guildford, Controller of the King's Household. He was a knight banneret, distinguished in war, and early in this very year he had been honoured with the Order of the Garter. His picture Holbein painted, and I have brought with me for your inspection a photograph of the original drawing made for it, and now in the valuable collection at Windsor. A pendant to this picture, painted at the same time, is the magnificent portrait of his wife, Lady Guildford, exhibited here at this time. The three qualities I have led you to look for in Holbein's work are the presentment of character, the seizure of expression, and the pictorial virtues of rich and harmonious colour, largeness of light and shade, rhythm of line and balance of composition. These qualities you will have no difficulty in discovering in the portrait of Lady Guildford. [Half length, walking to. A stout, proud, portentous, angry-looking woman. Dressed with much pomp and circumstance. Anne Boleyn head-dress, black veil behind gold brocade in front. Magnificent slashed gold brocade sleeves, slashed with white; many gold chains. Closed book and rosary in handsome hands. An orthodox woman returning from mass. Background—plaster on left, blue sky and fig tendril across it. Pose most characteristic of her. Face puffy and selfish, cruel brown eyes, a cold but handsome woman. A splendid glowing mass of colour and light.] No portrait known to me possesses these qualities more emphatically. The lady is not an attractive person, because we see her character so plainly, and it is an unattractive character. She is self-satisfied, self-conscious, proud, portentous, and scornful. There is a settled look in her face that marks an overbearing disposition. She is an orthodox person of the old school, on her way to mass, prayer-book and rosary in hand. There is pomp in her walk; dignity of a put-on kind. Her figure suits her mind, and the artist has not done anything to diminish the ponderousness of her form. So much for her character. Her expression is shown by the painter with an equal vividness. There is a glance in the eye; there are lurking traces of a bitter smile about the mouth; there is gesture in the holding of head and hands. Further emphatic of all this is the costume, which is of rich and heavy materials—velvets and brocades, all draped with chains of gold. The whole is set off by a background of elaborate architecture, and a blue sky crossed by a tendril of fig-bearing young leaves and bursting buds. The colours are rich and massed together into such a glowing harmony that whether you care about the person represented or not, you cannot choose but look at her, and your eye cannot fail of delight. Holbein, you must bear in mind, was not the inventor of portrait-painting, but only the greatest representative in the north of Europe.

#### *Early Portraits.*

Leaving out of account the sculptured effigies upon tombs, which scarcely professed to present the likeness of the dead, the earliest portraits of the Christian era are to be sought for in mosaics such as those at Rome and Ravenna. Popes, emperors, or some other wealthy and important personages, for the honour of God and their own glorification, were wont to decorate the apses of churches frequented by them with sumptuous mosaics. These mosaics were usually of one type, and represented the enthroned Judge of the world with the four-and-twenty elders on either hand, or the saints and apostles, and at his feet the lamb and the four streams of Paradise, and the sheep of his pasture, and the holy river and cities, and the palm trees of life, and the phoenix of immortality. Often, especially in the case of one pope whose name I forget, the munificent patron had himself depicted as presented to the Heavenly Judge by his patron saint. As time went on, pictures took the place of mosaics for mural decoration; they were multiplied too upon panels and in many other ways. The Madonna and Child, the symbol of the Divine ideal, were painted in every conceivable place—upon the walls of churches within and without, upon house fronts, upon book-bindings, upon panels. They were embossed on surfaces of metal, worked into textile fabrics, engraved upon copper, cut into wood—in fact, the ideal was made to take form by every process and in every substance that the ingenuity of man could devise. No altar, not even that of a private bedchamber, was complete without its picture or sculptured image of the Mother and her Babe Divine. At morning, at evening, and often at the other hours of the day, each pious man was wont to kneel in prayer before some such symbol of the Divine presence. This picture of the Virgin and Child, with a portrait of the person for whom the picture was made kneeling before them, and usually presented to them by the patron saint, could not fail to become common. At first the dignity of the Divine personages was symbolised by their great size compared with the donor, as, for instance, in the remarkable and famous Madonna picture belonging to the Archbishop of Cologne, painted by some great artist of that city during the fourteenth century. A hundred years later comes the Duke of Devonshire's Memling, where the Virgin still retains something of her old majesty, but the humanising element has been at work—she is no longer a mystic ideal drawn from a land of dreams, but almost a woman such as you might meet in the streets of Bruges in those days. Sir John Donne and his wife and child are, moreover, far more unimportant accessories. The knight's face, indeed, is perhaps the most attractive part of the whole picture—the feature which in the long run most tends to rivet the spectator's eye. The Virgin is interesting in so far as she is human; the Child in so far as he is a type of human babyhood; the old mystic ideal has lost its power. On the other hand, the donor is entirely human. We can see him and comprehend him as a visible man; he is such an one as ourselves placed in that strange environment. The element of complete humanity once introduced, the result which followed might have been predicted with certainty. Artists wanting in force and originality, such as the painter of the school of Gheerardt David, who made the picture which hangs under that artist's name in the gallery, adhered to the worn-out types, but with steady diminution of power. The life went from their work, and they could not conjure it back. All living and developing minds are inevitably carried forward along a certain road of advance. They cannot stand still or adhere to a bygone taste, however good the spirit may have been that once inspired it.

#### *Individuality.*

At the close of the fifteenth and the opening of the sixteenth centuries—the period of beginning of the so-called Reformation—the tide set with a flood of power such as did not come again till the period of the French Revolution. Men were becoming conscious of their individuality. They were refusing, they were being driven by the force of circumstances to refuse, any longer to be restrained and cramped within the boundaries of an universal creed. The movement for individual freedom of thought was begun. The revolt against authority in matters of opinion was inaugurated. As many men, so many different opinions; as many men, so many varying points of view; as many men, so many characters, so many modes of life, so many kinds of action. The social and religious machinery of the Middle Ages was breaking up. The units were forced to enter into new combinations. The swing and rhythm of the old life had ceased. New worlds were to be discovered, new spheres of action were to be found, new schools of thought were being formed. In such a day the joy of existence and its perils were great. "Oh, century," cried Ulrich van Hutten, "intelligences are waxing, studies are flourishing; it is a gladness to live." Where could a man of the old school find a peaceful resting-place in such a day? He must forward. He could not halt. The storm and throng of things carried him forward. He might resist, but what of that? Could he withstand the impetus of the earth in its orbit? Poor unit! Forward! There was the only hope! Thus art, the exponent of all fine thought, was inevitably driven into new areas. The Madonna became himself or vanished from the painter's canvas. Artists have to live by painting what their patrons want. The Fuggers



and the Nuhofs—Rothschilds of their day—men whose interests were spread abroad through all the known world, whose ships ploughed the troubled waters of every sea, whose wealth was the borrowed strength of monarchs, and their personalities the guiding force of industries that ramified throughout Europe and the East, such men wanted to leave monuments of themselves. It was to them that others came, because of the power that their own personalities had gathered about them, not because of the prestige of their office or the inherited glory of their name. The sixteenth Duke of Windlestraw might die, and the seventeenth would take his place and bear his honours with the added dignity of one more generation; but the head of the house of Fugger wielded a more individual power, and could not be certain of passing on his qualities with his name. The individual required an individual movement, and we cannot but recognise the rightness of feeling that there was in this. The portraits of that day which have come down to us possess an overwhelming interest, because in almost every case they are portraits of men who made an individual mark, men who in history remain individuals to the present day. Look back to the thirteenth, fourteenth, and first part of the fifteenth century, and you will find that though there are men who do stand out before us as individuals, they are relatively few. The great architects and painters are forgotten—they sank themselves willingly in the multitude of their fellows. Statesmen, unless of supreme eminence, are little more than names. The moving forces are continually anonymous. You have to look for the secrets of political life to corporations, municipalities, and guilds. Now come to the age of the Reformation. Everywhere individuals rise up in your memory. Great authors, great preachers, great artists, great soldiers, great discoverers, great merchants, great statesmen, great men of every kind. How comes this? The stuff is the same; its quality by no means inferior; the works left behind are not of a better average of excellence. Sixteenth-century architecture will not compare with that of 300 years earlier. The change is a change of circumstances; the men are different, because the work they have to do is of a different kind. Each individual is cast upon his own resources, and has to make the best of himself. If he fail it is because the stuff in him is not stout enough, the mind in him not wise enough. If he succeed it is mainly himself that he has to thank. "Oh, century, to live in thee is a joy!" It is an age of correspondence, of travel, of wide-reaching friendships. The leading men of Europe know one another. They have mostly, at some time, seen one another. Erasmus knows and corresponds with all the famous men of Europe. Dürer is found writing to an English friend. Holbein carries letters of introduction from country to country. A European press springs up, and the age of pamphleteering begins. A man's individual opinions have weight. A man's following begins to include multitudes whom he has never seen, but to whom he is, nevertheless, well known. Thus the need for portraits becomes pressing. Every one of eminence is obliged, willingly or not, to submit to pourtrayal. Friends and admirers pester him for his picture. If he be a great party leader his likeness is cut upon wood or engraved on copper, and prints of it are hawked about country markets and fairs all over Europe. They find their way into the cottage and the shop, as well as the palace. The face of a man becomes an important factor. Artists everywhere have to give themselves up to portrait making in one form or another. Dürer's diary shows us how great a part of his time was thus spent. Never did a day pass but he had to draw in pencil, or crayon, the likeness of some friend or other. After dinner he seldom failed to immortalise his host. His skill as an engraver was likewise so employed. We find Erasmus pestering him by letter for four years to engrave his likeness. Thus the whole whirl and tumble of a progressive art went forward. A great portrait painter could not but arise sooner in the midst of it all; and arise he did in the person of the pauper's son of Augsburg. It is curious that amongst all the people of pronounced individuality of that day Holbein, with his keen insight into character, his high position as a workman, his continual contact with men of light and leading, who have left us such numerous word-pictures one of another—it is curious, I say, that Holbein should himself remain so little of a personality to us. We know next to nothing about him except what he himself permits us to infer from his work. His contemporaries tell us nothing to speak of about the man himself, though their references to his work are frequent. The contrast between him and Dürer is very remarkable in this respect. Whoever saw Dürer was more struck by the man than the artist, great though his admiration for his art might be. When he died his loss was loudly lamented all over Europe. Holbein passed out of the world, and no one noticed that he was gone. The man had been a looking-glass, so clear that people hardly noticed him—saw only themselves reflected in him. The virtue of the portrait-painter is to annihilate himself, and this Holbein did to a remarkable degree. Like Shakespeare, he held a mirror up to nature; and, like Shakespeare, it was not till long after his death that his real greatness became apparent. He lost himself in his subject, spoke little we should judge, wrote hardly at all, but spent his life doing with splendid and silent veracity the work that was given him to do. He gave centuries of existence to his followers, and won alone a living name for himself. His influence in the domain of art reigned supreme for many years. If he had

not many pupils, he certainly was the leader to many followers more or less excellent, and, like him, for the most part little known except by their works. Of portraits by such men the loan collection has more than one to show, the portrait of Lady Abergavenny being perhaps the most notable. It is, however, in the old houses, guildhalls, and especially in the college buildings of our ancient universities, that such works are to be found in greatest abundance. They are not considered worth showing to the public, and so they lie neglected and unknown for the present, but their day will come.

In the natural movement of things, no product of civilisation is anything but transitory. Arts rise and pass away like all else that is human, and the greatest of schools has but its day, and then decays, and makes place for something else. The sixteenth-century school of portraiture was not very long lived. Two, or at most three, generations saw both its rise and decline. It was an art, as you have seen, dependent entirely upon social conditions, and social conditions changed rapidly in those days. Between the pictures of Holbein in the reign of Henry VIII., and those of Zucchero and his fellows in the reign of Elizabeth, there is the whole difference of an epoch; and the reason for this is not far to seek. The courtiers of Henry were in some cases, notably Wolsey's, men of great magnificence of life. They built for themselves sumptuous palaces, surrounded themselves with multitudes of retainers, and fared sumptuously every day. But such men were very few in number, and were regarded as attempting to rival the monarch in expense, and thus perhaps even in power. Life as a whole was still a tolerably simple affair, and the best and most enlightened men lived with little more show than their forefathers.

### THE HAWICK MEMORIAL COMPETITION.

A MEETING of the subscribers to the Duke of Buccleuch's memorial was held in Hawick last week. A report by the committee recommended that the plans prepared by Mr. Guthrie, architect, Hawick, be adopted; that these plans be sent to the Science and Art Department, with the view of ascertaining the amount of the grant to be obtained; and also that the Antiquarian Society be asked to intimate the sum they intend subscribing. If these sums, together with the remainder of the subscriptions to be called in, were found sufficient to meet the expense of the building, which was expected to cost (exclusive of the heating apparatus) 2,545*l.*, the committee suggested that the work be proceeded with. This report was agreed to by the subscribers. A letter from Mr. Fairley, architect, Edinburgh, whose plans had been selected by Mr. M'Lachlan, who was appointed for that purpose, was also read, Mr. Fairley complaining of ill-treatment. The subscribers resolved to pay the unsuccessful architect the sum of 10*l.* 10*s.* as compensation for his labour. On the suggestion of Provost Watson, the meeting agreed to instruct Mr. C. O. Murray, London, a native of Hawick, to make an etching of the memorial portrait of the Duke of Buccleuch, at present on exhibition in the Hawick Art Galleries, and to arrange with publishers for the issue of the same.

### FIRE PROTECTION.

ON the 19th instant a trial took place with a new and self-propelling floating steam fire-engine, constructed by Messrs. Shand, Mason & Co., to the order of the Bristol Corporation, for the protection of the docks and waterside property in that city. The hull and propelling engines have been constructed to the specification and under the superintendence of Mr. J. W. Girdlestone, engineer to the Bristol and Avonmouth Docks, while the fire-engine is similar to one supplied in the early part of this year to the Metropolitan Fire Brigade, which has proved so successful at several waterside fires that two others are now in course of construction by the same makers. The experiments were conducted in the presence of Captain Shaw, C.B., chief of the Metropolitan Fire Brigade, and Mr. Wingfield, superintendent of the Bristol Fire Brigade, and were carried out in a satisfactory manner. At a previous trial a few days since at the measured mile a mean speed of 8.9 knots per hour was obtained, which, considering the size and special construction of the boat, proved very satisfactory. The boat is of steel, 53 feet long and 13 feet 6 inches beam, built in four watertight compartments, the screw propeller being driven by a pair of high-pressure engines, supplied with steam from the fire-engine boiler. The fire-engine is Shand, Mason & Co.'s "Equilibrium," discharging 1,100 gallons per minute through a 2-inch jet, reaching under favourable circumstances a height of 200 feet. There was no opportunity of testing the height on this occasion, but a water pressure of 140 lbs. per square inch was obtained, the steam pressure being 110 lbs. The boiler is of Shand, Mason & Co.'s patent inclined water-tube construction, which has been successfully in use for fire-engine and other purposes for fifteen years. The boat will be taken through the canal to Bristol in a few days, and finally tested there in the presence of Mr. Girdlestone and the Bristol authorities.



## NOTES AND COMMENTS.

A CAPITAL shilling handbook on "The Art of Oil-Painting" has been published by Messrs. LECHERTIER, BARBE & Co. It is by Mr. JOSEPH BOUVIER. We have rarely met with so much information in fifty pages. Mr. BOUVIER knows how to write with brevity, and has compressed many hints into his little book. He gives his reader the benefit not only of his own experience derived from practice in this country and on the Continent, but reveals methods of other artists. Thus we are told that ETTY sometimes produced his marvellous flesh by using emerald green for the second painting before glazing. If we remember rightly, DELACROIX followed the same plan. UWINS told Mr. BOUVIER that "he generally mixed vermilion and black for his shadow tints." LANDSEER, when painting dogs, put in "the light tints with a very full brush, and when dry scraped them down with well-sharpened razors, after which he glazed freely, and dragged his lights thinly over, which gave the gloss of the silky hair." There is reason in these methods; but what is to be said of an English artist who attempted one of TITIAN's masterpieces in the Louvre with nothing but ultramarine and white, hoping to gain the effect by glazings? The French copyists in the gallery must have believed that the English were as eccentric in art as in other things.

FROM an agreement which has been published it would seem that M. DORÉ, civil engineer, did not anticipate any other future for his son GUSTAVE than that of being a dexterous lithographer. In the document it is stated that M. DORÉ, having a desire to develop the talent of his son, GUSTAVE DORÉ, then of the age of sixteen years, had entered into an engagement with M. CHARLES PHILIPON, of 29 Place de la Bourse, Paris, and that the latter undertook to procure for GUSTAVE DORÉ lithographic work, to be executed either with chalk or pen. The engagement was to last for three years, and during that time GUSTAVE DORÉ was not to execute a drawing for any other employer. M. PHILIPON was to commission at least one drawing a week; but young DORÉ was not to be bound to do more than one if his studies, holidays, or illness prevented him. It is evident that M. DORÉ was anxious that his son should continue his literary studies. Whilst the negotiations were in progress GUSTAVE DORÉ sent some sketches to a comic journal, and it was at once recognised that another genius had been enrolled in the ranks of book-illustrators.

A SEMI-PRIVATE exhibition of rather more than ordinary interest has within the last few days been held at the Boltons Studios, South Kensington. It consisted of a selection of pictures and studies by Mr. FRANCIS BATE, an artist of foreign sympathies and foreign training, whose reputation is steadily gaining ground in this country. In practice an Impressionist, his inclination is especially towards the pictorial treatment of those varying effects of open-air light to which as yet comparatively few British artists have given their attention. He has taught himself to see Nature, and the individuality of his practice is unquestionable; but it yet remains to be seen how far he will be successful in gaining his fellow-artists over to his side. His exhibition is at all events worthy to be put on record as a practical exposition of an original conception.

By a majority of one vote, M. DIET has been elected a member of the Académie des Beaux-Arts in succession to the late M. PAUL ABADIE. His competitors were M. DAUMET and M. NORMAND. M. DIET received seventeen votes at the first trial and eighteen at the second, while M. DAUMET received sixteen and seventeen votes. M. NORMAND obtained but two votes. M. ANCELET's name was mentioned, but he had no share in the voting. The completion of the large hospital, the Hôtel Dieu in Paris, has been carried out by M. DIET. The completion of the Palais de Justice in Paris, the restoration of the château at Chantilly, have been entrusted to M. DAUMET, and he has succeeded M. ABADIE as architect of the great church which is in progress at Montmartre.

HOWEVER disappointing trade returns may appear, there are fortunately plenty of people who are able and willing to invest in pictures at prices which are satisfactory to the artists. One out of every three of the works in the late exhibition of the Royal Institute of Painters in Water-Colours has been sold. In other words, 1,083 pictures were hung in Piccadilly, and

365 were bought in the galleries. The prices ranged from five to four hundred guineas, and the sum expended amounted in all to 12,335*l.* 8*s.* The experience in Liverpool has been likewise satisfactory. Last year at the Autumn Exhibition 226 works were sold, realising 8,472*l.* 10*s.* 6*d.* This year the number of pictures sold was 272, the value of which was 11,147*l.* 9*s.* 6*d.* Statistics are rarely so interesting to artists as in these cases.

THE railway system of New Zealand is being expanded by a line which will connect the town of Wellington, the most southerly port of the northern island, with the railways north of the Manawatu district. This is owing to private enterprise, and will furnish railway communication with the rich agricultural districts of Wanganui and Taranaki. The Manawatu plains begin at a distance of between thirty and forty miles from the town of Wellington. As the traveller leaves this town he follows a road skirting the base of the hills, and washed by the mingled waters of the harbour and an inflowing river. After a mile or two he would turn up a branch road on his right that runs through a gorge in the hills, just near the spot where stood a picturesque moss-covered water-mill. For twelve miles or so the road goes over undulating ground through a forest, whose trees are not unseldom to be seen nine, ten, twelve feet in circumference, some even exceeding that in girth. Emerging from this, the waters of Porirua harbour are seen and skirted, and most likely two or three long carved canoes owned by the swarthy New Zealanders are drawn up on the strand. Then comes another stretch of timber for miles over decidedly hilly country. Issuing at length from the shelter of the forest, the traveller finds he is skirting the open ocean, its waters 2,000 feet below him, while the Manawatu plains stretch away in front to the north. A descent of two miles brings him to the plains.

A BILL has been lodged by the magistrates and council of Glasgow, with the object of acquiring powers to borrow a sum not exceeding 250,000*l.*, for the maintenance and repair of a large extent of roads and streets which were formerly turnpike, the preamble stating that those roads and streets and others in the city are in bad repair, and that from the great traffic upon them it is expedient that they should without delay be paved in a substantial manner. The sum of 50,000*l.* is to be applied in connection with the construction and repair of sewers, a further sum of 50,000*l.* is to be applied for general police purposes, and the remaining sum of 150,000*l.* is to be borrowed on the security of the Roads and Bridges Act assessment, and is to be applied in executing the provisions of that Act. The Water Commissioners have introduced a Bill for the extension of the water supply, for which purpose a sum not exceeding 1,000,000*l.* will have to be raised, in addition to the 2,000,000*l.* authorised to be borrowed by previous Acts.

A RUSSIAN professor has been experimenting on the best way to remove dry rot. He says that a thorough draught will destroy the parasite within twenty-four hours. If the action of draught be assisted by that of sunlight, a few hours will often suffice to put a stop to further damage. A concentrated solution of common salt is very efficacious, and the stronger it is used the more rapid its action. The action of a concentrated solution of cupric sulphate (blue stone, blue vitriol) is still more energetic and complete than that of common salt. Crude carboic acid is rapid in its action and cheap, but inconvenient to use. But he considers that the best, cheapest, and most convenient material to employ is the tar obtained when birch wood is distilled for acetic acid; the under surfaces of the flooring are painted with the tar.

THE timber-measuring case, which was tried in the Queen's Bench Division, is certain to be heard of in every court where a barrister is allowed to practise. With a railway company on one side and an association of timber merchants on the other, there is no fear about fees. The old-fashioned established way of measuring trees is by the string. If the railway companies consider that it is inaccurate as a test of weight, why are not special weighing-machines devised by them? What is called a ton of timber is only an approximation, forty feet of one kind being supposed to be equal to fifty of another kind. But, as performed by railway porters, the measurement is but a rough-and-ready operation, and is very different from what is done in a private timber wharf.









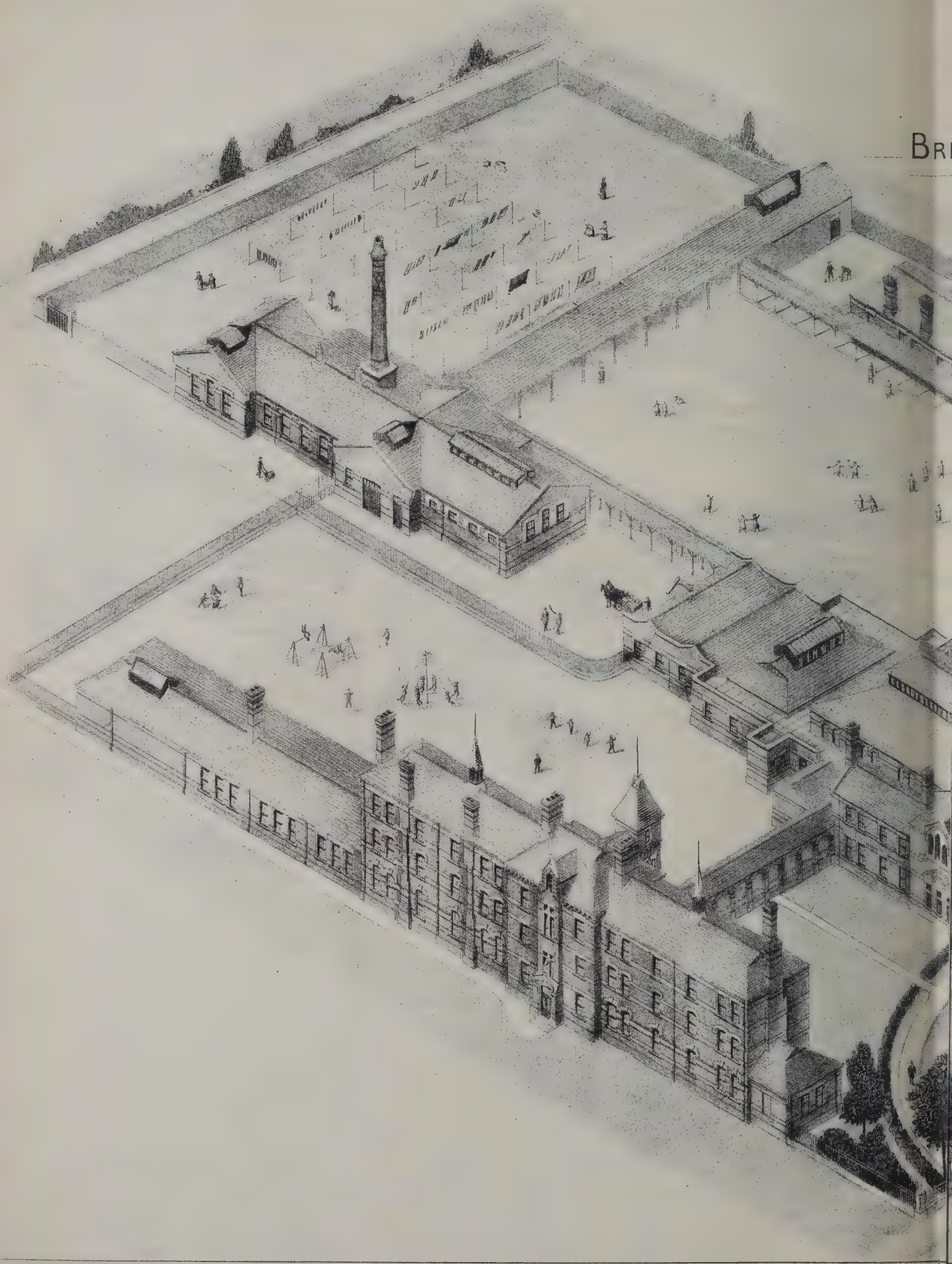
HOUSE AT ENFIELD.  
FOR H. C. WELD ESQ.  
J. S. MOYE, ARCHITECT.







BR



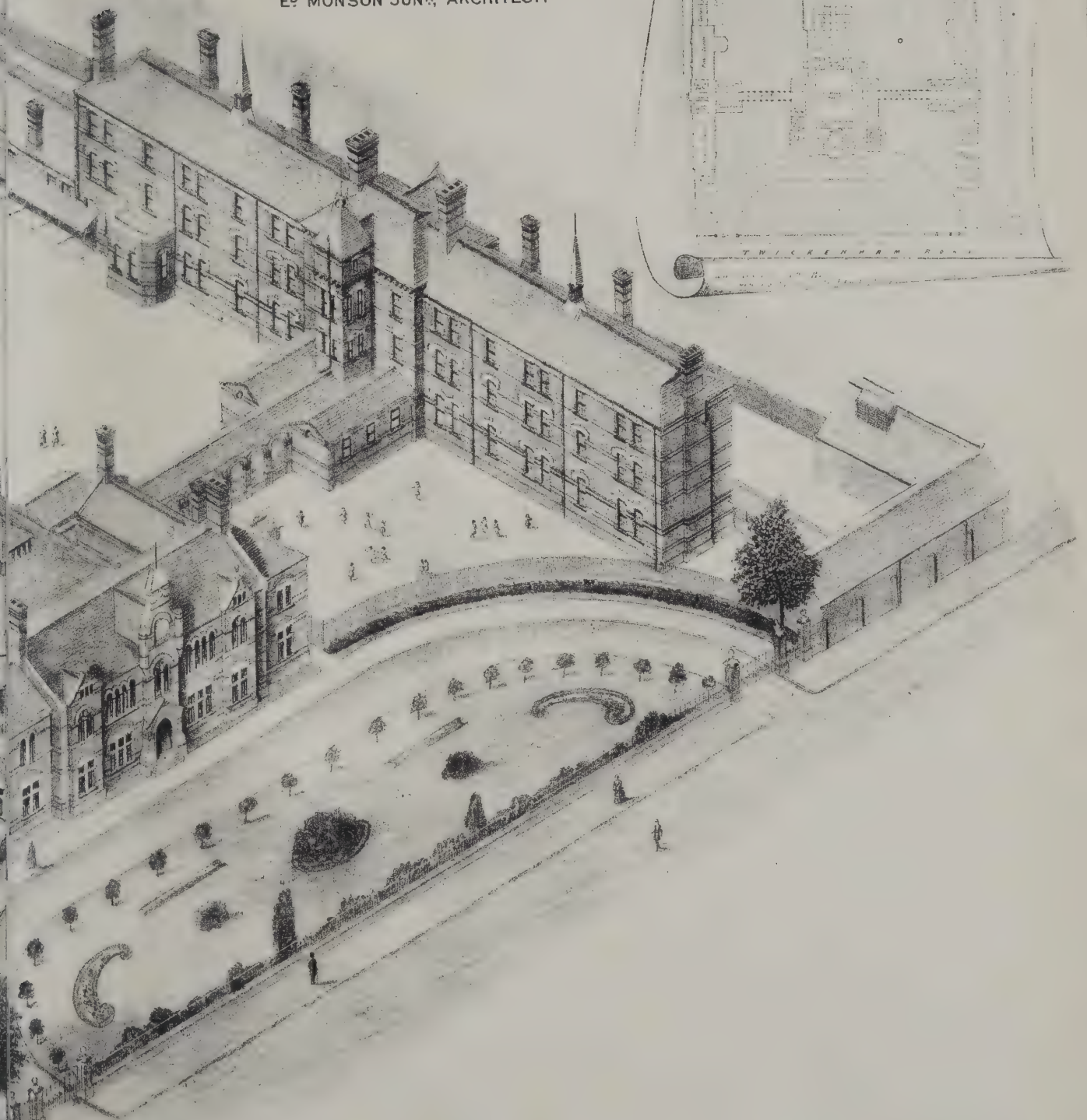


1884.

# BRENTFORD DISTRICT SCHOOLS

## ISLEWORTH

ED. MONSON JUNR, ARCHITECT.











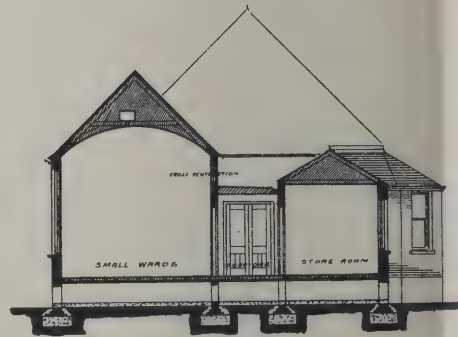
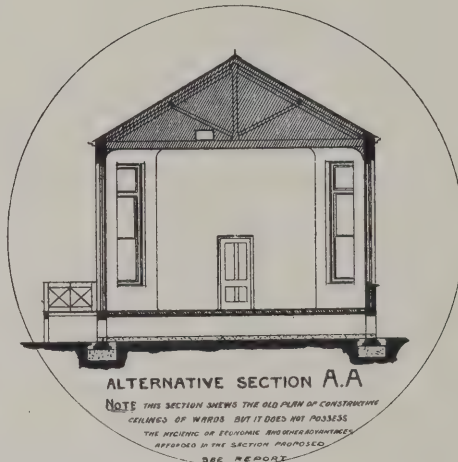




• • FRONT • ELEVATION • •



SECTION A.A ACROSS WARD

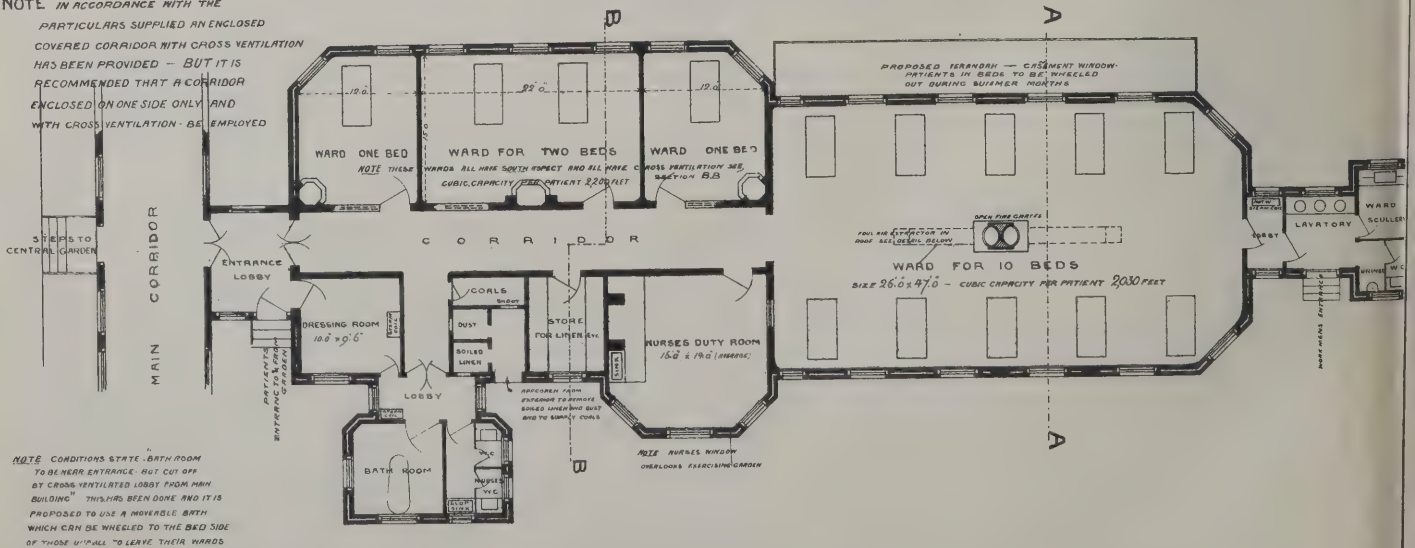


SECTION THROUGH SMALL WARDS B.B

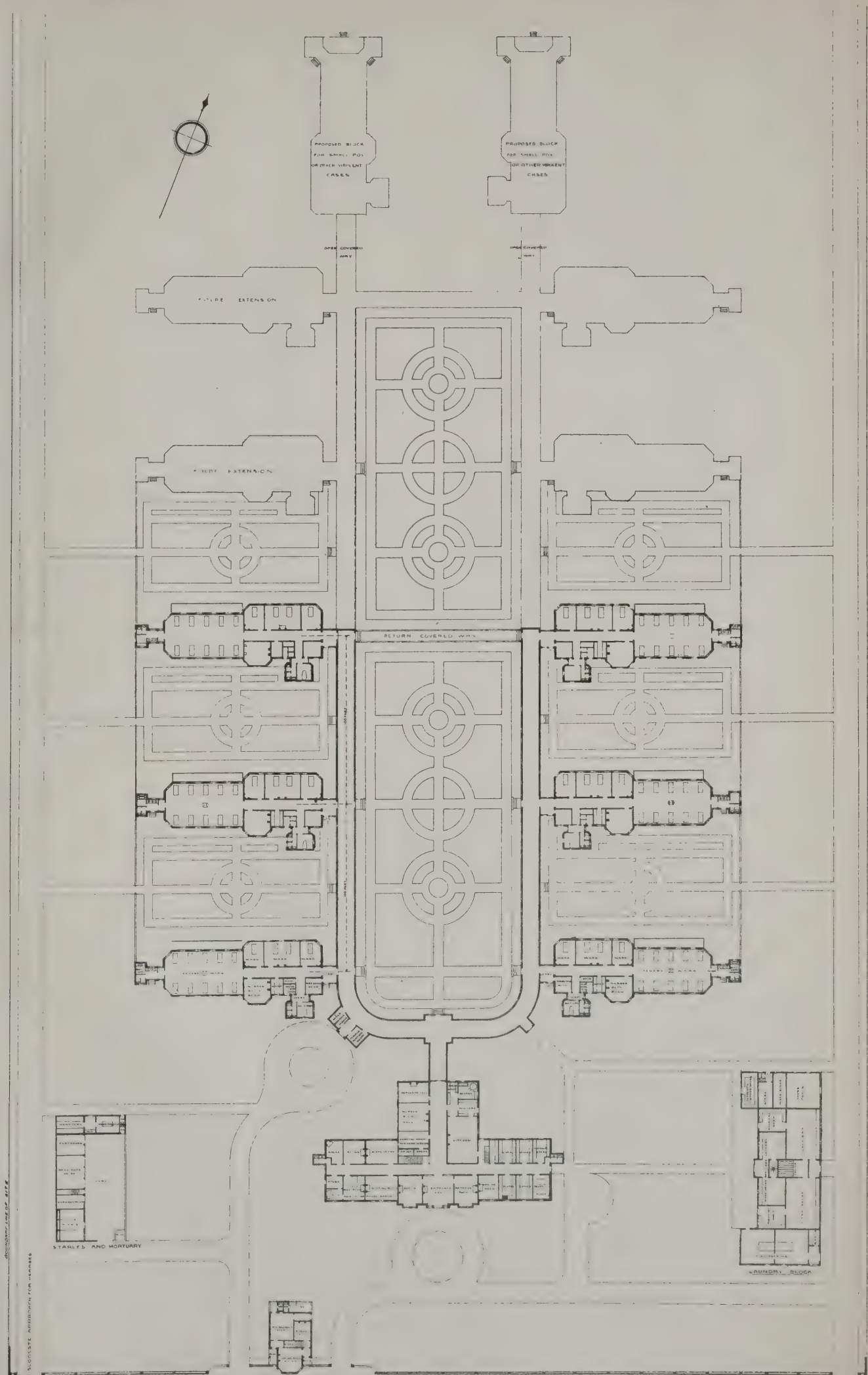


SOUTH ELEVATION OF WARD BLOCKS

NOTE IN ACCORDANCE WITH THE PARTICULARS SUPPLIED AN ENCLOSED COVERED CORRIDOR WITH CROSS VENTILATION HAS BEEN PROVIDED - BUT IT IS RECOMMENDED THAT A CORRIDOR ENCLOSED ON ONE SIDE ONLY AND WITH CROSS VENTILATION - BE EMPLOYED















DESIGNS FOR GOLDSMITHS WORK.  
BY W. R. LETHABY.







## ILLUSTRATIONS.

HOUSE, THE RIDGEWAY, ENFIELD.

THE house shown in the accompanying illustration has been recently erected on the Ridgeway, Enfield, for Mr. H. C. WELD. The works have been carried out by Mr. MONK, of Edmonton, from the designs and under the supervision of Mr. JOSEPH S. MOYE, architect, 3 Southwick Street, Hyde Park Square.

DESIGNS FOR GOLDSMITHS' WORK.

WE publish two designs for silver dishes, by Mr. W. R. LETHABY. One is to be pierced and engraved, and the second *repoussé* and parcel gilt. They are a great improvement on what is generally produced in this country, but manufacturers ascribe all defects to the action of the Exchequer in levying too high a duty on plate.

THE BRENTFORD DISTRICT SCHOOLS, ISLEWORTH, W.

THE buildings shown in the illustration have been lately completed for the Poor Law Union of Brentford.

*Block No. 1* is the girls' and infants' pavilion, and accommodates 107 girls and 37 infants. It contains on the ground floor:—Girls' school-room, 53 feet by 18 feet; girls' class-room, 18 feet by 12 feet; girls' day-room, 62 feet by 18 feet; serving-room, 28 feet by 12 feet 3 inches; infants' school-room, 18 feet 6 inches by 18 feet; infants' day-room, 18 feet 3 inches by 18 feet; girls' mistress' sitting-room, 14 feet by 12 feet 3 inches; infants' mistress' sitting-room, 14 feet 3 inches by 10 feet; teachers' room and girls' library and reading-room, 14 feet 3 inches by 10 feet; girls' bath-room, 25 feet by 10 feet 9 inches; girls' lavatory, 25 feet by 10 feet 9 inches; 19 w.c.'s. On the first floor are two dormitories, 71 feet 3 inches by 18 feet 9 inches, one for 35 beds and cubicle for monitor, and the other for 37 beds; infants' lavatory, 14 feet 6 inches by 10 feet; infants' mistress' bedroom, 14 feet 6 inches by 10 feet, and w.c. accommodation for night use. The accommodation on the second floor is similar to that on the first floor.

*Block No. 2* is the boys' pavilion, and accommodates 108 boys. It contains on the ground floor:—School-room, 53 feet by 18 feet; class-room, 12 feet by 18 feet; day-room, 62 feet 6 inches by 18 feet; masters' sitting-room, 15 feet 3 inches by 10 feet; teachers' library and reading-room, 15 feet 3 inches by 10 feet; bath-room, 25 feet by 10 feet 9 inches; lavatory, 25 feet by 10 feet 9 inches; tailors' shop, shoemakers' shop, and carpenters' shop, each 20 feet by 13 feet 6 inches; 10 w.c.'s and 12 urinals. On first floor are two dormitories, 53 feet by 18 feet 9 inches, one for 25 beds and cubicle for monitor, and the other for 27 beds, masters' bedroom, assistant-masters' bedroom, and w.c. accommodation for night use. The accommodation contained on the second floor is similar to that on the first floor.

*Block No. 3* is the administrative block, and is capable of administering to the wants of 300 children, containing on the ground floor:—General dining and recreation hall, 50 feet 9 inches by 36 feet; serving-room, 21 feet by 10 feet; kitchen, 23 feet by 20 feet; scullery, 20 feet by 13 feet; ten lock-up rooms for stores, 13 feet 6 inches by 7 feet, with space for unpacking; committee-room, office, chaplain's-room, matron's cutting-out room, officers' mess, and sitting-room. Three rooms for superintendent, training kitchen, training scullery, wood and coal stores, entrance hall, vestibule, and corridors 9 feet wide, all round dining-hall. On the first floor, approached by separate staircases for boys and girls, is a chapel 69 feet by 25 feet, and six bedrooms for officers.

*Block No. 4*.—Swimming bath, boiler-house, and laundry block for 300 children contains:—Swimming bath, 26 feet by 22 feet, with dressing-room attached; boiler-house, 35 feet by 24 feet, with chimney shaft 55 feet high; laundry, 34 feet by 21 feet; drying closet, containing eleven "horses"; wash-house, 24 feet by 19 feet 3 inches; receiving-room, 24 feet by 10 feet; and airing and drying-room, 17 feet by 24 feet.

The whole of the buildings, with yards, &c., cover an area of about  $3\frac{1}{2}$  acres, and are laid out as boys, girls, and infants' playgrounds, laundry drying ground, and general yard. Each of the playgrounds contains a covered portion, with asphalted floor, 100 feet long by 16 feet wide, and the whole of the blocks of buildings are connected together by covered corridors 6 feet wide.

The cooking is done by means of steam and gas. All the

fittings, both for cooking and laundry purposes, boilers, &c., were supplied by Messrs. ROSSER & RUSSELL, of Hammer-smith; the gasfittings were executed by Messrs. DEFRIES & SON, of Houndsditch; the water-closets throughout are fitted with BOSTEL'S Brighton "Excelsior" flush-out apparatus; the children's latrines are fitted up with Messrs. BOWES, SCOTT & READ'S patent self-acting flush-out closets; the dining-hall, chapel, corridors, &c., are heated by hot-water pipes and apparatus also executed by Messrs. ROSSER & RUSSELL; the remainder of the rooms are warmed by SHORLAND'S patent Manchester grates.

The schools were erected by Mr. THOMAS BRUNSDEN, of Brentford, from designs by Mr. EDWARD MONSON, junr., A.R.I.B.A., of Grosvenor House, The Vale, Acton, W.

DESIGN FOR NEWCASTLE HOSPITAL FOR INFECTIOUS DISEASES.

THIS design, the joint production of Mr. MARK J. IANSELL, of Bedford Row House, and Mr. WALTER J. H. LEVERTON, of Wandsworth, was awarded the second premium in the recent competition.

It is on the pavilion system, with single pavilions, in order to obtain as much isolation as possible, and all the wards are on the ground floor.

Six pavilions are to be built at once, but the conditions required the plans to be arranged so that four or six additional ones could be added subsequently.

The administration block is kept to the front in order to be easily accessible to outsiders. A separate entrance-gate is provided for bringing in patients.

The wards are designed on a modification of the "Tollet" system. They are raised and isolated from the ground on open arches. The ceiling (which in the Tollet system is in the form of a pointed arch, with extraction openings at the apex) is taken up the underside of the rafters, and the junction with the walls rounded off. By this arrangement all the advantages of the Tollet form, with regard to ventilation, are obtained at a much lower cost.

The axes of the wards are placed east and west, so as to have no intervening spaces swept by the prevailing winds, and to obtain verandahs on the south sides into which the patients could be wheeled. Hollow walls are used, rendered internally with Parian cement. The drawings illustrate, in a very complete manner, the various details of the scheme, in which all the latest improvements in hospital planning have been introduced.

The heating is by open ventilating stoves, assisted by steam. The laundry apparatus, which is Messrs. BRADFORD'S, is also worked by steam.

## THE COLOUR CLASS OF THE ARCHITECTURAL ASSOCIATION.

THE work submitted in competition for the prize in the Class of Colour Decoration, 1884, has been examined by Mr. Aitchison, A.R.A., who has kindly prepared the following report:—

I think, having regard to the quantity of studies, to the care bestowed, and to enough being completed to judge of the whole, that Mr. Hennings is entitled to the first place. His *Municipal Hall* is complete and fairly harmonious. The tone of his *Drawing-Room* is also fairly harmonious; though the colour is not agreeable, his ceiling is well carried out. His *Opus Alexandrinum Pavement* is neatly drawn; and his detail of the *Altar Cloth* the most complete of any sent in, though nothing can be said for it in point of colour.

Mr. Lewis seems to occupy the second place. His drawing of the *Side of a Hall*, in orange, is mainly marred by the pale blue lines, which are too wide and not the right colour, as they produce a dazzling effect. The two long panels of his dado in his red hall are very successful. The detail of his *Altar Cloth* is carefully drawn, and, with the correction of some harsh lines and more delicacy and vigour in the termination of his leaves, would be effective.

If the exhibition of real taste and inventiveness in colour were to take the palm, I should give it to Mr. Woodward. His sketch detail is the best bit of colour exhibited. He has, however, made the two white bands separating the yellow ground from the border too wide; they divert the eye from the main white of the crane, and should be reduced in width, or, what would perhaps be better, be toned by a light grey pattern. Portions, too, of his *Altar Cloth* are very good—the deep crimson with pale pink fleur-de-lys, and the harmonies of grey-blue, brown, and gold of the border. So also is the brown monogram edged with gold on the pale pink.



The effect of the whole cloth is spoiled by bands of raw white. As a rule, colours should be separated from one another by fine lines of gold, black, or white, as circumstances require.

Mr. Miller also shows considerable taste for colour in his rough sketch of a ceiling, where the dark gold and grey-blue festoons and flesh colour of the cupids tell very effectively on the light red ground; the pea green of the border is unhappy. There is some promise of vigour in his Turkey carpet, only the pea green and yellow are too crude.

Mr. Pite should elaborate his sketch for the *Pompeian Hall*, and send it to the Royal Academy for exhibition; the idea of black, chocolate, tawny-red, and orange shot with red in succession is original, the spacing is not quite right; the dado band of dull green and black spots is very good in its place, if he had kept his white lines very fine. His upper band above the door is a discord, and his frieze is not a success; windows should never be put in a wall for coloured decorations.

Mr. Inglis also shows taste in colour in his *Side of a Hall*. By candlelight, the pale puce, yellow, white and black are very harmonious, and his little figure on a black ground on the yellow panel, but by daylight the yellow is too coarse and the pale pink does not harmonise; his ceiling, too, is harmonious.

Mr. Herbert's *Pompeian Hall* is not without merit, though the wide bands of scarlet on yellow is a little barbaric; the white lines are in many instances too wide, and the white animals in the dado in the wrong place; the doors want something in the panels, and also the black wall panels want figure or ornament.

Mr. Adkins's *Altar Cloth* is also fairly harmonious, and he has fairly well managed his white bands; the upper ornaments are too large, and the blue and green are not quite right.

The Colour Class is to be congratulated on the great improvement shown, and those who are interested in colour and have a natural gift, should consider no time thrown away in mastering the art: it is purely for delight, and, if not delightful, is worse than whitewash. What Horace says of bad poetry, that neither men, gods, nor booksellers can endure it, is equally true of bad colour.

## THE SCOTTISH NATIONAL PORTRAIT GALLERY.

ANOTHER important step towards the realisation of a Scottish National Portrait Gallery has just been taken, says the *Scotsman*, in the adoption by the Board of Trustees for Manufactures of plans by their architect, Dr. R. Rowand Anderson, for the construction of the necessary buildings. The design holds out the promise of a building which will at once admirably meet the requirements of the case and prove a notable architectural ornament to the city. The funds at present available will not admit of its being immediately carried out in its entirety; but enough will be done to provide all, or nearly all, the space that is intended to be allocated to the Antiquaries, and to afford more room for pictures than is likely to be occupied for years to come, while giving such a favourable impression of the artistic character of the building itself as may be expected to foster a general desire for its early completion.

The site is the vacant ground in Queen Street, between North St. David Street and North St. Andrew Street. In shape a regular parallelogram, measuring some 260 feet in length—that is to say, along the line of Queen Street—by about 70 feet in width, it readily lends itself to the construction of long galleries, capable of being thoroughly well lighted. It is to the providing of this sort of accommodation in the most convenient form that Dr. Anderson has, in the first instance, directed his attention. The result is a design distinguished, like his work generally, for purpose-like simplicity of internal arrangement. In its complete form this embraces two sets of galleries, exactly similar in size and number, one set on either side of a central vestibule and hall; but at present the back portion of the set on the west side, appropriated to the portrait collection, is not intended to be fully carried out. The block to be now constructed will thus assume the form of an oblong, with a space of the same shape left vacant at the south-west corner. The building is to be of three storeys, with a basement on the side next the lane; the ground and first floors being lighted by side windows, the upper floor entirely from the roof. In the centre of the Queen Street front will be the main entrance, giving access to the vestibule, which measures 25 feet by 13 feet, with a lavatory at each end, and from which one will pass to the central hall, designed to be 44 feet square. The vestibule has only the height of the ground floor, but the hall rises into the first floor, on which level it presents an open corridor supported on an arcade, the lighting being by windows in the back of the building. From the ground floor of the hall access will be afforded to the galleries right and left, as also to two staircases, one on either side, that lead to the upper floors. On the first floor it will only give access to the portrait gallery on the west side; the east wall, from this level upwards, forming a substantial partition between the portion of the building assigned to the Antiquaries and that appropriated to the portrait collection. The accommodation for the latter, as

at present arranged, is to consist of three galleries, one on each floor, on the north or Queen Street side of the block, severally measuring 82 feet by 26 feet; a room over the vestibule, on the first floor, and, on the second floor, one extending over both hall and vestibule, whose dimensions will be about 60 feet by 44 feet. For the Antiquaries, again, there are to be provided, on the east side of the hall, three galleries of 82 feet by 26 feet on the Queen Street side, exactly corresponding to those set apart for the portraits, and three more of 60 feet by 26 feet on the south or lane side of the building, together with ample storage room in the basement. The space to be, for the present, left vacant on the portrait gallery side corresponds to that occupied in the eastern section by the smaller set of galleries. In the absence of any urgent demand for space, the question of finishing off the wings of the building, for which alternative designs have been submitted, to cover a space at each end of 20 feet in frontage by 70 feet in depth, may remain in abeyance for some considerable time. Besides the storage space appropriated to the Antiquaries, the basement will afford plenty of cellars, as well as accommodation for the necessary heating apparatus.

The style of architecture adopted is the Gothic of the latter half of the thirteenth century, as applied to secular purposes. In making his selection, Dr. Anderson has been guided by considerations of utility as well as beauty, the style in question being one which readily adapts itself to the providing of sufficient window openings for such of the galleries as must be lighted from the side. The building accordingly will bear its character on its face, presenting a notable example of the good results to be obtained by recognising the prime importance of internal arrangements, and adjusting to these the forms which are to be relied on for external effect. On the ground floor of the Queen Street façade is a range of large pointed windows, separated by massive piers. Over each of these, on the first floor, is a pair of coupled windows, also pointed and enclosed within a pointed arch; the piers intervening between the pairs being formed into niches, with pinnacled canopies for the reception of statuary. The main entrance is a pointed doorway, deeply moulded, and forming the leading feature of an effective central elevation, finished off atop as a gable, and showing a row of niches over the door, and a triple window on the first floor level. The upper flat of the frontage, corresponding to the second floor, presents an expanse of plain wall that will serve as a foil to the telling effects of light and shade realised from the niches and window openings of the lower storeys. The south side of the building next the lane will be treated in the simple style befitting its position, due care being taken to provide for the adequate lighting of the ground and first-floor galleries. As has been indicated, no definitive resolution has yet been adopted in regard to the finishing of the wings. According to one plan they will have a rectangular form; while an alternative design offers an arrangement of round towers, one at each of the four corners, which, on paper at least, seems to add a desirable element of picturesque effect. The niches along the frontage are intended to be occupied with full-sized statues of notable personages—a scheme which should at once illustrate the desirableness of combining sculpture with architecture, and afford to Scottish practitioners of the former art a much-needed outlet for their taste and skill.

No time will now be lost in preparing the working drawings, and it is expected that building operations may be commenced early in the ensuing spring.

## THE LATE JULES BASTIEN-LEPAGE.

SOME letters have appeared in the *Figaro*, which reveal the difficulties attending the late Bastien-Lepage, the painter, during the early part of his career, and they are accompanied by notes by M. Macé de Challes, who was his friend. We learn that the painter was born in the village of Damvillers, which lies on the road between Montmédy and Verdun. In the local school his aptitude for art was remarked, and in course of time he was sent to the Ecole des Beaux-Arts in Paris. There he had to depend on the assistance which he received from home. The amount was, however, insufficient for his modest requirements, and an appeal was made on his behalf to the administration. At the end of 1873 he was glad to accept a donation of one hundred and fifty francs from the Minister. In the competition of 1875 he received only a second medal, and he was deeply moved by the disappointment. When he read the news in the courtyard of the Ecole des Beaux-Arts, he struck his umbrella against one of the posts and exclaimed, "The judges have not eyes to see!" His subject was *The Angel appearing to the Shepherds*, and, in one of his letters, he says that while painting the shepherds he thought much of Ribera. In 1874 Bastien-Lepage's portrait of his grandfather and his *Printemps* were exhibited at the Salon, when he was honoured with a third medal. Next year his portrait of M. Wallon brought him the second medal. He said he was enchanted; but there was some regret when he found that he was placed after painters whose works he disliked. In 1876 he tried again for the Prix de Rome, but he did not even secure a nomination. Three years afterwards, on the recommendation of the local deputy, he was enrolled among



the Chevaliers of the Legion of Honour, and for the brief remainder of his life he might be considered as successful.

M. Albert Wolff has rendered a tribute to the memory of his friend, of which the following translation may afford a notion:—

Everyone, except the painter himself, knew that Bastien-Lepage had arrived at the close of his life. He has been taken from us in his prime, and in him we have lost the greatest artist of the young French school. He may have been less known to the public than other men of inferior genius, but by painters and experts he was placed in the very first rank. His art was not a superficial art, neither did it depend on trickeries nor on the attraction of fashion. All its value was drawn from Bastien's subordination to nature, from his thoughtfulness, and the vigour with which he bent himself to his task. The slights he received might wound his sensibility, but they could not discourage him.

I have followed his career from the time when the portrait of his grandfather appeared in the Salon, and was regarded by the crowd of artists who surrounded it as if it were a revelation. I believed that this young man from the school of M. Cabanel was a master. The naturalistic movement had served him, but his picture was the first in which life in the open air was expressed in all its radiance. His precursors were men of talent. Bastien-Lepage, in seizing principles which had been established, and indeed formed the foundation of the new school, added the science which heretofore had been wanting. He brought to his work accuracy and sobriety, and used his mind as well as his eyes and hand. Bastien was at first poor and unknown when he came to Paris, so he sought a refuge in the southern district of Mont Parnasse, where life is less expensive than in other parts. His fellow-artists saw him rarely. To some of them he was a peasant who had yet to be civilised, to others he was simply a bear. He lived by himself, and was supposed to be unsocial; he spoke but little, and was said to be proud. He appeared to despise talk, or at least he was not anxious to refute his critics by speech, and in this spirit he acted to the end.

The truth is that Bastien was an artist and nothing else. He was retired because he was not eager to submit himself to other influences than his own will, and as he was never weary of his work he could dispense with the excitement of the Boulevards. I had written about him for several years without knowing him. The first time that I heard from him was after an article had appeared on his fine picture showing a peasant woman gathering potatoes. Seeing his efforts to attain simplicity and truth, I said I was confident that the artist would never be allured by thoughts of gain. The next day he wrote to me that I could take his word it should be as I said, and it was so.

The grandest title, the best homage that the critic can render to Bastien-Lepage is to say that he lived for art. His great works, such as the *Hayfield*, will testify to this. The subject may not please all, for it is only a man stretched on the grass, but the sentiment was admirable; there was a sense of air and light, and the picture became memorable by the spirit which the young artist had put into it. He had no wish to make pictures for the sake of selling them, and yet he desired to live. Portrait painting supplied his modest necessities. Among his first experiments was the portrait of his brother, for whom, notwithstanding the difference in age, he had an affection that was paternal. This portrait, when exhibited at an artists' club, was at once recognised as a masterpiece. It recalled Holbein. Bastien-Lepage was one of those who believe it is best for an artist to know his subject. To express the character of the original in a portrait was his ambition, and it may be said that in several of his works he has placed himself on a level with the greatest portraitists.

I have seen him at work. At his own desire he painted the portrait of myself, which has gone round the globe, and has been seen everywhere with wonder. He had then migrated across the river to the more expensive district near the Avenue Villiers. He said to me, "I wish to represent you working at your desk, amidst a litter of journals and manuscripts, in your office coat, and not dressed for a first night at a theatre." This was in winter. He arrived every morning at a very early hour, I posed before him and he posed before me. I can still see him leaning on the easel, with his eyes fixed on me, as if he wished to penetrate to my soul. His head was not well formed, but he was rendered almost handsome by the ardour and ambition which shone through his pale features. He was very often dissatisfied with what he had done, and painted out the work of the previous day. In the intervals of the sittings I had many an opportunity to study him. This young peasant was one of the most exquisitely organised of artists, with a mind that was open to every kind of intelligence. He confided to me his plans. It was only, he said, by compounding with one's conscience, and by submitting to the caprices of others, that it was possible to gain money. If he could only amass an income of 10,000 frs., he would live according to his fancy, and paint pictures for himself, and not for the market. Never was I more moved than by his avowals. His nervous movement and the emotion of his voice revealed how much he had thought of the subject, and how his desire had mastered him.

His portraits were not numerous, for the labour was difficult to him, and, as soon as he gained a little money, he fled from Paris to the fields. He brought back work which, whatever might be said

of the style, left no doubt of the great powers of the artist. Some pictures of country life were also produced, such as *The Forge*, a work which, when exhibited at the Salon, was not well hung, and, in consequence, lost some of its importance. My own belief is that Bastien-Lepage was better fitted to produce pictures on a small scale. His exquisite qualities are better seen in little works; in enlarging his figures, they seemed to lose sometimes the charm that belonged to the personality of the painter. It was surprising to see how much he could put into a simple head, and above all in a portrait. His powers appeared to be greater in proportion as they were concentrated in a limited space.

His great ambition was to paint the portrait of Victor Hugo, not, as he said, to advertise himself, for which there was happily no need, but because he wished to preserve a record of the features of the poet whom he honoured above all others. I obtained permission from the great poet to bring the young artist. On the evening that was appointed, Bastien-Lepage was paler than usual, he could not eat, and was as nervous as a school-boy. When we came to the house he said, "Don't let us go in yet, I am afraid." I asked what was his fear. "I believe," he replied, "that I can never venture to paint the portrait of Victor Hugo; to do so is to represent an epoch." Bastien was unable to finish the portrait, for the poet's occupations did not allow him to sit for more than a month. But a result of his visits to the house was a *chef d'œuvre* in his portrait of Madame Drouet, a small picture which, from its sincerity and as a study of character, may be placed by the side of one of Albert Durer's works. The lady is there before us, with the traces of her remarkable beauty, her delicacy, and her suffering, for the artist recognised the struggle of his model against the fate that was closing round her. The poor artist had only reached his thirty-fifth year when he died, surrounded by works which are the witnesses of his career. *La Soirée d'Automne* will go to the Louvre, where it will be recognised as a manifestation of the aims of the young school of France, and as a consolation to those who have to contend with the current of routine.

## ART AND INDUSTRY.

AN address was delivered by Mr. Gambier Parry at the distribution of prizes to the students of the Gloucester School of Art on the 17th inst. Mr. Parry said:—I have addressed the pupils of this school for many past years, and have occasionally singled out special subjects among the many that are taught here. I have addressed the scholars on elementary art, on the reasons for adopting the methods pursued here; I have specially addressed them on painting and on architecture and on the poetry and beauty of fine art. This evening I more particularly address myself to those who attend what are known as the artisan classes; and I request their attention to a few words about their work here, and what it is that this school offers to them.

They have often rather mistaken the real use of the school to them. These Government schools were originally devised for the artisan classes, and such among them as showed ability to rise to the higher grade in their own particular trade, and from that to advance, if they showed that still further ability to rise to the practice of ornamental and inventive art, as many in past and present times have done. I refer particularly to those pupils who attend the classes for building construction and machine drawing, and who have expected to learn what no such school could teach them of their trades. I want them to see what real good, real value this school can be to them, though it may not be exactly what they at first expected.

The master of an art school cannot also be a master carpenter or a master mechanist, but what he can teach, and what appliances and models in this school were designed to teach, is neatness of handling and correctness of eye. No workman of the common rough kind is attracted to such a school or such work as is found here. None but such as have an ability above their fellows will have the taste or inclination to the quiet work of this place. The carpenter, the builder, the machinist, who comes here is one who, from the very fact of coming, may be sure of the possession of ability to advance in his work; but he must understand in what way he will be taught to do so. He will not be taught to use his carpenter's tools better, to lay bricks better, or to make machinery better, but the result of his teaching and work here will be to do all those things better by clearing his mind about them, by learning to see finely and clearly what he only knew in a rough practical way before; and he will obtain this advanced knowledge and skill by the indirect way of learning about various things and subjects which apply to those of his own particular trade, and widen and enrich his mind about them. For instance, it is easy to perceive how much clearer a man's mind is on any subject when he can put it down on paper, whether by drawing or writing. Art, that is to say the particular purpose of this school, is a form of writing. A design is the writing in the best form of language for its purpose of any object in a man's mind—no other mode of language so perfectly describes the idea a man had formed, whether of a mechanical construction, a piece of building work, or a machine;



see, then, how valuable the lessons are that are gained by work here. The clearer a man's ideas are on anything the better he will do it. Now the process of putting them upon paper is one both of analysis and synthesis at the same time; it is a powerful form of education, and as it teaches the special, the best language for its expression, it is worth a man's trouble and time and perseverance.

It may seem to him at first that the subjects he is called upon to pursue here have no bearing on the one he has specially at heart. What has geometrical drawing, or perspective, to do with such trades as his? I can only reply that they teach him to see things scientifically, to understand things in all their relations and attitudes, it opens reason into imagination, by which he forms ideas of relationship between things and things that he never thought of, or would have thought of before. So I say his sense, his understanding, is widened and enriched; he approaches common mechanical work with a superiority to it, and a mental confidence not otherwise obtained; and by such accomplishments he rises above his fellow workmen, he gains in self-respect, and if he has the ability to rise to higher branches of his profession, this study will have given the spring to what otherwise would have been dormant, and will have opened the first development of powers of mind and skill that his future life will profit by and bless. I urge the consideration of such thoughts as these by the workpeople around me—and when I use such a word I mean to include women, girls, and boys in the class whom this school and its quiet steady work will benefit. I urge them to profit by it, and if they would do so let them undertake it with this view, that they come here to clear and enlarge their ideas, to train their conceptions, and to educate their minds by the learning a new language—art's language—that will at once teach them while they learn it, and be to them a fund of resource for the advantage and the happiness of their lives.

The estimation of fine art will always be the gauge of the mind that makes it. Some people look deeply into everything that engages them; others, the greater number, look seriously upon few things, and touch all other things but lightly. So with regard to fine art, some look on it as an amusement, and many as a matter of no use or consequence, or, perhaps, that the world would be better without it. Others look to it merely as a means of livelihood, but have no heart for it; but, having taken up some easy or mechanical branch of it, they pursue it with much the same interest that a lawyer's clerk gives to the deeds and documents that he copies out day after day. The real and worthy estimate of it is far different from these; but in our English life of busy struggle against difficulties of all sorts, that struggle against the whole world that has called out our courage, taxed our resources, and forced our energies to the front, we must be glad that the productions of our finest arts afford any real benefit and satisfaction to our people, be it what it may, high or low. But can any real benefit be an object of low class? As fine art is a result that both soul and body combine to produce, the estimate of it, as high or low, may be rightly made from the inspirations of the intellect downwards to the ingenuity of skill where fine arts merge into useful arts, as, for want of a better word, we classify those which supply the absolute necessities of life. But how hopeless language is when applied to art, how utterly inadequate and misleading is that word! As though what we style "useful" were only true in relation to our bodily state, and in no respect affecting the immortal element of mind and spirit, for which all that can render service and profit is in an infinitely higher sense "useful" than what the present material civilisation, of which the modern age is so proud, can effect; as much higher in its usefulness as mental cultivation is above bodily comfort, luxury, or even existence, as the soul's health is above all the considerations of our mortal state. It is no low estimate of art's "usefulness" when it comes to the relief from the exertions of professional life, domestic anxiety, monotonous labour, uncongenial work, and other causes of mental wear and tear that are common in the world—a relief that comes of entertainment without fatigue, a pleasure that is the best antidote to mental weariness and pain, by turning the flow of thought and feeling into fresh channels, and filling the mirror of the mind with images of interest or happiness or beauty, without demand for further attention or care than each mind may have strength or ability to give to them. Our fine arts are most valuable in this weary world, even if they be regarded in this the lowest estimate of them.

Nor must we throw aside too hastily another form of their benefit to many to whom I referred above as following them without heart or interest, but as a mechanical pursuit for livelihood. These departments of art, such as some subsidiary processes of engraving, of photography, of plan drawing, and of many forms of copying and so forth, can only be brought to perfection by much wider range of study both of eye and hand than what each one singly may require. I mean that elementary, and even in some cases that advanced, art-study that trains the attention, drills the nerves and muscles of the brain and fingers to higher and more difficult work, both of understanding and execution, by which a skill is reached that can be applied with readiness and success to any work that becomes the object of it. Even if our experience or witness of actual life is insufficient, it needs but little stretch of imagination to picture to ourselves realities which, in every class

of our social state, are hidden from the outside world by the tender sense, the refinement, the high principle and self-sacrifice of those who labour on in devotion to parents, friends, and families, crushed by sickness, sorrow, or misfortune, and who, by those high motives of heart and work, support by their unflagging industry (even if it be irksome to them) those from whom all hope and resource has been cut off, and over whose sorrow and distress affection strives to throw a veil. Such are the works, in many departments of fine art, by which many, old and young, to whom nature has denied physical strength for severer employments, can and do occupy themselves—persons of whom the world might well be proud if it did but know them, angelic lives in dreary homes, a living smile where all else is sad, unnoticed, perhaps, but blessed. It is hard to say that art could have a higher object than such a service as this; but it has a far higher sphere of intellectual interest and attainment, entirely apart from the private or individual value of it—a sphere, I mean, of national cultivation, by which a whole people is affected; and whether observed or unobserved by themselves, their interests and pursuits, their work and recreations, are supplied and brightened by the unflagging and beneficent resources which fine art affords to them. In whatever form, under whatever guise, it be followed, whether mentally for its poetry and philosophy, or practically for its ingenuity or its education, it is full of good; but above all for its inexhaustible language, by which the thought, the emotion, the enthusiasm of human hearts find their best expression, their own relief and happiness, and the charm and refreshment of many other lives than their own. Such is but a very slight sketch of a very true picture of what art is or might be; of what it is to many, and might be to all.

### THE PRESENT STATE OF ARCHITECTURE.\*

THE advanced civilisation we live in demands of us a line of action differing somewhat from what has gone before. Almost up to the present century an architect's work has been confined to some one building or set of buildings. In the earliest times the architect was the master builder, and often finished but one piece of work during his career. This has been true until within the last two or three hundred years. It was easy for him, comparatively speaking, to do his work to the satisfaction of his client, and to leave a monument finished in every detail.

To-day a man in active practice is expected to design everything, from a cottage to an ornamental public building. From Bazileel, who was designated by God to erect a tabernacle in the wilderness, down through Phidias and Vitruvius, John of Gloucester, Irvin of Steinbach, and Robert de Beverley, to Michael Angelo, an architect's work has been confined in narrow channels, and it may well be doubted whether these masters could have left a name had they been obliged, as we are, to turn from a temple or palace to a dozen other totally different problems all in one year. The times have changed, and we of to-day are loaded with such emergencies as were unknown to the ancients. This should give courage to him who is dissatisfied with his work. If, in spite of the multiplex problems laid out for him, he succeeds in evolving one satisfactory building, he will have done quite as much as the architect of old. It is of importance to us who make up that latest product of time, the architectural profession of the West, to recognise the great changes which have come over the practice of our business. We ask ourselves why ancient buildings were good. M. Viollet-le-Duc has shown, and I think justly, that the beautiful temple called the Parthenon was the result of constant and minute criticism of entire educated Athens. This shows the law of our nature, working toward a distinct end. Where there is a gathering of men, all intent on one purpose, the result must be the perfect expression of the work of them all.

Society to-day calls on us for a much wider range of thought than was formerly expected of an architect. On account of the condition of our life, we are in a measure cut off from that peculiar help the old architects had from each other. We now principally need the restoration of the spirit of brotherhood which has been lost. We certainly are capable of doing more than those who went before. We have their work before us, both in general and detail. We have photographs of their monuments as a whole, the coloured prints of their interiors, and the scaled measurements of their most delicate parts. We have their writings, with the conclusions of their lives. With all these and our own facilities for perfect intercommunication, which the men of old most sorely lacked, why is it we do so little which is thoroughly satisfactory, even to ourselves?

Haste, resulting from feverish push, is responsible for much. We are asked for complete results in a period which to the ancient would have been too short for his first conception. Were it not for other things, there could be no satisfaction to the mind of an earnest man in doing his work, but in spite of our being so hurried by the rush of modern life, we have a chance to guard ourselves against mistakes if we will but analyse our position. We

\* An address by Mr. D. H. Burnham, delivered at the opening meeting of the Western Association of Architects in Chicago.



all need kindly criticism. No man can be a law unto himself, and the best effort of the brightest intellect must be inferior to what it might be if the designer would submit his work to the scrutiny of others in his profession. We look to this convention to inaugurate an era of good feeling among the architects of the West. Recognising our standing in the advance of civilisation, we feel that combined effort would save to us and to posterity the best thoughts of us all; that working merely as individuals, entertaining a narrow, jealous disposition towards others, we cut ourselves off from those corrections which are absolutely essential to prevent such glaring flaws as inevitably come from haste.

It is not intended to claim extra brilliancy of intellect or warmth of heart to us of the West, but the conditions which invariably produced perfect styles in the past are now once more active among us. What made the architecture of Athens? I have quoted from a celebrated French author to show that the results came from freely-expressed criticism of the populace, but this itself arose out of what was far more potent. Athens was a commercial city; to it came men of all nations; at its port were seen the dresses of all tribes, and there were heard the tongues of the civilised world. From the very nature of things the Athenians were the brightest spirits of the times, and probably the best informed men then on the globe. The restless activity of their minds and their adventurous feelings had brought them from far divergent lands; they were animated to overcome all difficulties, to seek the great commercial cities of their day. The city was filled with individuals from the various countries around the Mediterranean, who were well posted on science, art and manufactures. Picture to yourself a humdrum countryman in Athens for a day or two. Must he not have been astonished at the quickness of mind of all about him—at the extent and precision of knowledge among sailors, soldiers, merchants and philosophers? Again, a few years later we find a similar set of circumstances producing the same result. Carthage arose like a queen from the sea; her towers and palaces were spoken of by the ancients only in terms of deepest wonderment. Again, Rome rose in all her magnificence, and drew the choicest men and materials from the entire world; rare gems, colours in purple and fine linen, a manuscript of the past; but, above all, in her streets were found the sublimed Greek, the Gaul of scientific turn, and the sweetest poets of all countries.

To-day we have this conglomeration of men who make up our great West. More than the Athenians, the Carthaginians, or the Romans, do we feel a spirit of enterprise; in a greater degree do we draw to our centres the thinkers of all countries. Here come determined, bold spirits, who, filled with ambitious dreams, have left their older homes in Germany, France, Italy, England, in the Orient, and in the older states of our own country, all imbued with the same restless activity, the same readiness to give up the old when the new is better, the same fearless examination of everything laid before them.

We are, without doubt, all, in a certain sense, adventurers. Each man brings some knowledge peculiar to the land of his birth. Each one has the disposition to look upon things in accordance with the nature of his blood and the education of his province, and the community as a whole is thus constantly enriched with the thought of this steady stream of keen, incisive, thoroughly living men.

If we recognise this fact, and all of us determine to make the most of it, we must show a progress that will surpass anything which has gone before. In short, we possess the whole past in a living form, ready to actively assist each and all of us in the struggle to eliminate crudities and to secure what is in accordance with the unchanging laws. No man among us can possibly possess more than a fragment of the knowledge of all, and if we would do the best with our lives we must do the best for the community and the times we live in. This can be brought about by each one acknowledging his shortcomings and being willing to frankly and kindly accept the help of others, and, still more, to give it in the same spirit himself. If there is a man amongst us who has an ambition to leave an honourable name—and I hope this is true of every individual—he may be sure he will fail of his object if he works for himself alone. There are many things, undoubtedly, which will come up for discussion in the convention, which are peculiarly its province. I will, therefore, only mention a few, as, for instance, the schedule of fees, the code of professional ethics, and that frequent source of trouble—competitions. Remember that our science is a union of all sciences, and this to a degree that cannot be said of any other profession, and that the great man is both a theorist and at the same time thoroughly practical; that we should be ingenious and apt to learn.

Recognising this, it is hoped that an impetus will be given here which will carry us on to success and make our work better. It is not to be hoped, perhaps, that the name of each shall go down to posterity, but it may be hoped that the united efforts of us all will leave impressions which shall stamp a pure American spirit on the ages to follow.

Shall we teach the lesson of united effort in an honest, manly cause? The famous scientist whose philosophy crowns the thought of this century said, in his few words of warning to Americans, "The duration of your institutions will depend, not on your

education, but upon your character." Does not every one of us see that it is so, and hope with Spencer that the blood of our hearts may warm us toward the common good, and the thought of our brains be toward the accomplishment of our work as a whole, and not primarily toward the fleeting success of the individual, be it in finances or in popularity.

## MEASUREMENT OF TIMBER.

A TEST case was heard in the Queen's Bench Division, before Mr. Justice Grove and Mr. Justice A. L. Smith, on the 19th inst., which concerns the timber trade. It was an appeal by the Great Western Railway Company from a decision of the County Court Judge at Dudley. The sum claimed was 4*l.* 10*s.*, being the balance of an account for the carriage of timber in the form of trees with the bark on carried by the plaintiffs on their line for the defendants from Moreton-in-the-Marsh to Withymoor. The sum sued for is the difference between the charge which the plaintiffs are entitled to if the tonnage of the trees is to be ascertained according to what is known as "tape measurement," and what they are entitled to if such tonnage is to be ascertained according to what is known as "string measurement." The plaintiffs claimed on the former, and the defendants had paid them all on the latter. The Act of Parliament under the 119th section of which the plaintiffs are entitled to charge 2*d.* a mile per ton for the carriage of timber is a private Act (8 and 9 Vict., c. 184), the words as to the weight being "Forty cubic feet of oak, mahogany, teak, beech, or ash, and fifty feet of any other timber shall be deemed one ton, and so on in proportion for any smaller quantity." The difference between tape and string measurement arises from the mode of ascertaining the quarter girth at any given point, from which, when once ascertained, the cubic contents are calculated on the same principle and from the same table in both cases. In tape measurement the entire girth is measured with a measuring tape over the bark, and then divided by four to get the quarter girth. In string measurement string or pack thread is used and drawn tight round the tree; the string is then twice doubled, then measured so doubled along a rule, and when the bark is on the tree a deduction is made for it of half an inch in the case of trees less than 12 inches entire girth and 1 inch per foot in larger trees, and the remainder is the quarter girth. The quarter girth arrived at by string measure is less than by tape measure, because (1) the string, being thinner than a flat tape, is found in practice to fall between the rough edges of the bark and run closer to the solid wood, and the entire girth is thus less; (2) in doubling the string twice before measuring it, instead of measuring the full length, something is lost; (3) deduction is made, as above stated, for bark in the case of trees measured (as all but oak trees are) with the bark on. The actual weight carried is not ascertained; but, as a fact, it generally exceeds the measurement tonnage, whichever way ascertained, and sometimes very largely—in fact, by 8 cwt. or 10 cwt. when string measurement is used, in which case, too, the railway companies get no additional freight for carrying the bark. String measurement is and always has been the usual mode of measurement in England as between buyer and seller, and the defendants contended that at the time of the passing of the plaintiffs' private Act (1845) it was the usual mode of measurement of trees in the round for all purposes. There was no evidence in the case, as found by Sir Rupert Kettle, the County Court Judge at Dudley, as to when tape measurement was first introduced, but it was undoubtedly introduced by the railway companies, and the plaintiffs contended that they were entitled to charge according to it, as being the more accurate and the proper method as between consignor and carrier. The defendants' contention was that "string measurement" was the proper method as between consignor and carrier as well as between buyer and seller, and that the words of the Act must be construed according to the custom of timber measurement in common use in England at the time of such Act having been passed. The County Court Judge decided that the plaintiffs were only entitled to charge for tonnage according to string measurement, and against that decision the railway company appealed.

Mr. Justice Grove, in giving judgment for the respondents, said the case involved nice points which he could not say were wholly free from difficulty. Still, he had arrived at the conclusion that of the two systems of measuring timber, that by string was *prima facie* certainly the more accurate mode. It was not found as a fact in the case that the string would be liable to stretch while round the tree and contract when it came to be measured; and the Court could, therefore, not take judicial notice of that, if it were really the fact. Neither the measurement by tape nor that by string would give perfectly accurate results owing to the rugosities of the bark, but it was not for the Court to suggest a more accurate method of measurement. All that the Court had to do was to say by which of the two methods—by tape or by string—the more accurate measurement of a given bulk of timber would be obtained; of the cubic contents of the trees and not of their weight in tons. The allowance of half an inch for the bark must



be held to be reasonable, and the string measurement to be that by which their bulk would be more accurately ascertained.

Mr. Justice A. L. Smith, in concurring, said the words to be "deemed to be a ton" showed that the intention of the Legislature was that it was on the cubic measurement and not on the weight of the trees that the carriage was to be charged. From the shorthand-note, which was incorporated in the case, it appeared that one of the witnesses for the defendants, who was the secretary of the association of English timber merchants, had given evidence that for nearly forty years timber had been customarily measured by string and with the bark on, and the timber trade had known nothing of tape measurements, introduced, as he believed, by railway companies, until but a short time ago. He was inclined to go further than his brother (Mr. Justice Grove), and hold that the cubic contents of the timber must be ascertained by the railway company according to the mode of measurement which had prevailed in 1845. The measurement by string, going as this did closer to the wood, gave more accurately the number of cubic feet, and, in his opinion, the decision of the County Court Judge had been right, because the "string" measurement was in accordance with the customary mode of arriving at the 40 cubic feet in a tree in 1845, and because, too, that mode was more accurate than measurement by tape.

Mr. Justice Grove said he must not be taken to differ on the question of string measurement being obligatory on the railway company, because it had been the customary mode in England in 1845. His view was that the other ground on which the appeal was dismissed was the stronger one.

The appeal was consequently dismissed with costs; but leave to appeal against this decision was granted.

### AN INDUSTRIAL EXPERIMENT.

THE following account of an experiment in industrial remuneration is narrated by Mr. Broadhurst, M.P.:—For more than four years the Parliamentary Committee of the Trade Unions Congress have continually censured their secretary on the dilapidated condition of their offices; for four years the secretary had successfully evaded the terrible visitation of painters, paperhangers, and bricklayers, but, like many other deferred debts, it had to be met; and after the horrors of an autumn session of Parliament, the additional punishment of cleaning up was comparatively a light one. So I summoned to my aid the general secretary of the Amalgamated Society of the House Painters and Decorators, and, after the usual consultations and measurements, we came to terms, and the work was commenced.

There are five men engaged in the work, one of the number acting as foreman and responsible man, and representing, as far as I am concerned, the employer. He undertakes the whole job for a certain sum of money; each workman will draw his regular trade wages while he is engaged in it, and whatever surplus remains when the work is done will be equally divided among the whole of the men employed. In addition to the ordinary work of the painter and decorator, there were new stoves to be set, new gas fittings to be made, and some joiner's work to be done. The chief of the painters undertook all this work, which in turn was given to the respective trades, and done on the same terms and in the same manner as the painting and decorating. I will undertake to say that the material is of the best quality and that the workmanship cannot be beaten by any nationality known to man. This means not only the natural enjoyment to the occupants of the rooms which is a consequence of the best work, no matter what the work may be, but also prevents the recurrence of this unpleasant visitation for a considerable number of years. All articles of value remain in their places during the repairs, because I know they are safe, and I know they are safe because each workman is a member of his respective trade union. If any further guarantee was necessary, I have it in the very solid position of the trade unions themselves.

Thus, in a small way, the consumer and the producer are brought hand to hand. I, as the representative of the Trade Unions Congress Parliamentary Committee—that is the consumer—having the offices renovated in the most substantial and expeditious manner; they, representing the producer, having a pleasant engagement; and should there be any profit, they will reap the advantages of it. I am fully aware that this is altogether a small and, may be, an insignificant affair; but that has mostly been the position of the present big and substantial affairs of the world. I would rather be the author of this insignificant but practical result than sit in council for a week attempting to manufacture "Aladdin's lamps." I cannot help thinking that there must be a great number of real friends of labour who would be quite willing to engage this little band of men for similar purposes if they only knew how and when they could get them. If I am right in this good opinion of some parts of the human family resident in this great Babylon, I should be most happy to answer any communication on the subject.

There are only two conditions asked of customers—first, payment immediately upon completion of work; secondly, low-price

work is not undertaken. In return for this the householder will get thorough work of the highest quality and the best material the market offers. In addition to this I will answer for the character of the men both as to skill, expedition, sobriety, and civility. Will some of our well-wishers give the suggestion a trial? When the work is complete it will be gladly shown to any *bond fide* visitor to the rooms at 19 Buckingham Street, Strand, W.C. I wish it to be distinctly understood that the men to whom I have referred combine with the ordinary house-painting the very best decorative workmanship.

### LINCOLN CATHEDRAL.

AN address was delivered lately by the Rev. Precentor Venables on "Lincoln Minster." It may surprise some of my hearers, said the lecturer, to be told that Lincoln Cathedral is amongst the younger cathedrals of England. It is true, that its juvenility is not excessive. It numbers eight centuries, which is certainly a very respectable age. But other cathedrals, not the *buildings* but the *sees*, are much older. Canterbury, and York, and London, and Winchester, and others, are twelve hundred or thirteen hundred years old, and might at the period of its foundation look down upon Lincoln as a younger sister. Lincoln, however, though of comparatively recent foundation, is the representative of two very ancient English sees—that of the men of Lindsey, founded after their conversion by Paulinus of York in 678, the seat of which was probably at Stow, the church of that little village being its cathedral church; and that of the Middle Angles, the seat of which was placed at Leicester in 680, which was occasionally held by Bishops of Lichfield. The savage inroads of the Pagan Danes, who mercilessly stamped out Christianity wherever they mastered the country, blotted out the bishopric of Lindsey—it is said the reddened walls of Stow church still tell of the fire kindled by the Pagans—and drove the bishops of Mercia further inland. They took up their *Cathedra*—the Bishop's stool, our Anglo-Saxon forefathers called it—and, retreating to the banks of the Thames, planted it at Dorchester, not far from Oxford. The church of this place then became the cathedral church of Mid-England, from the Humber to the Thames, a vast stretch of country, including no fewer than ten counties, those of Lincoln, Northampton, Rutland, Leicester, Cambridge, Huntingdon, Bedford, Buckingham, Oxford, and Hertford, and continued such till after the Norman conquest, when, by the license of the Conqueror, the see was transferred to Lincoln. The removal was brought about in the following manner. When William the Conqueror, then only Duke of Normandy, was preparing for his invasion of England, a monk, by name Remy (in Latin Remigius), was almoner of the Norman monastery of Fécamp. He contributed to William's expedition one ship carrying twenty fighting men. The grateful invader promised that if he became master of England the first vacant bishopric should be Remy's reward. The opportune death of Wulfwig, Bishop of Dorchester, the year after the Conquest, enabled William to make good his promise. The Norman monk became bishop of the largest and most powerful see in England. The personality of Remigius is very distinct. Almost dwarfed in stature, dark of complexion, undignified in aspect, "nature," says Malmesbury, "seemed to have formed him to show that the richest intellect might dwell in the most wretched body." But though "small of stature he was great in soul, though dusky of hue he was fair in his works." For one of the chief of those works we of Lincoln have cause to remember him with gratitude. For Remigius was the first founder of our cathedral. The era of the Norman Conquest was marked by the transference of cathedral churches from unwalled villages, open to the attack of the marauder, to walled towns. Before the Council of London, which in 1075 issued an edict to that effect, Remigius, accustomed to the lordly cathedrals of the Norman cities, looking with contempt on the humble episcopal see of Dorchester, on the very southern edge of his vast diocese, had resolved to remove his bishop's stool to some worthier and more central site. We of Lincoln shall not wonder that of all the towns in the ten counties subject to his episcopal sway none appeared so fitting as Lincoln. Hither, then, he transferred his see, and on the crest of the hill, looking down on the broad valley of the Witham, hard by the castle "already rising to curb the haughty burghers" of our "wealthy and famous" city, on a site already consecrated in part by the old church of St. Mary Magdalene, he reared his cathedral, "strong as the place was strong, fair as the place was fair," as acceptable to the servants of God who were to minister in it as it would be secure from the attacks of all enemies. Commencing the vast work soon after the removal of the see, about 1074, the church was ready for consecration in 1092. But the founder was not allowed to witness the solemn dedication of his cathedral. May 9 was fixed for the rite; all the bishops of England were bidden by royal order to come together to take part in it; but "man proposes and God disposes." One of the episcopal body, Robert of Hereford, foreseeing from the conjunction of the stars—for he was a skilful astrologist—that the consecration would not take place, stayed at home. The others came, together with a vast crowd of men of all ranks; but three days before the appointed time Remigius was no more.



Remigius's church, as far as we can gather from the fragments left to us, must have been an uncompromising example of the Norman style, just introduced by the conquerors, in its sternest simplicity. The walls bare, unrelieved by ornament; the sharp edges of the semicircular arches without even chamfer, much less a moulding; the windows were round-headed apertures. The austere fabric would have found little favour in our eyes, and while we rejoice that enough has been preserved to show us what it was, we may well congratulate ourselves that it has generally been replaced by something so much more beautiful. It grew year by year and century by century, grew in size, in dignity, in beauty, in fitness for its high purpose, until its arched vaults and soaring pillars, its mazy aisles and long perspective, its long roof and triple coronal of towers, attained the unrivalled majesty and beauty which is our daily glory and our pride.

Remigius's successor, Robert Bloet, is not recorded to have built anything at Lincoln, but to his successor Alexander—"surnamed The Magnificent," from the sumptuousness of his equipage and the lavishness of his expenditure—did much. The nephew of Roger, of Salisbury, in his time the most powerful man in the kingdom, like his uncle, he was, in his early days, far more of a castle builder than a church builder. The fortresses of Banbury, Sleaford, and Newark rose at his command. But they were his ruin. He and his uncle and his cousin, Nigel, of Ely, were too strong to be safe subjects. A pretext of a brawl, raised by their retainers, at Oxford, was eagerly caught by King Stephen. The Bishops were seized, and by the threat of starvation, which was actually begun to be carried into effect, Alexander was compelled to give up his castles into the king's hands. This was in 1139. Two years later, in 1141, the cathedral suffered from a disastrous fire, which burnt off the roof and destroyed the flat ceiling of timber. To obviate the recurrence of such a calamity, Alexander vaulted the whole church with stone, and repaired the church "with such subtle artifice" that "it looked fairer than in its first newness." To the same magnificent prelate we may safely assign the three magnificent western doorways and the lower portions of the western towers with their elaborately ornamented gables. With these additions and alterations the fabric of the cathedral remained as Remigius left it.

Some forty years after the completion of Alexander's works England was visited with the shock of an earthquake (such as that felt at Colchester not many months ago), which threw down many buildings and rent our cathedral from top to bottom. This was on April 15, 1185. The next year saw the election of one of the holiest and most devoted of the prelates, who have adorned this see by their virtues—the Carthusian monk and prior, the son of a Burgundian noble—the sainted Hugh of Avalon, an upright, honest, fearless man, an earnest, loving Christian bishop, than whom in the whole range of English worthies, lay or clerical, few deserve a higher place. Finding the cathedral in ruins, he at once resolved to commence its re-edification. Some time elapsed in preparing the designs and collecting the materials for so great a work, and the first stone was not laid till 1192, the third year of Richard Cœur de Lion. The architect's name, by an unusual good chance, has been preserved, and was Geoffrey of Noyers. The style adopted was the pure Early English, a lancet Gothic which had just been developed from the stern old Norman or Romanesque, of which the choir and eastern transept of our cathedral afford the earliest known example. Bishop Hugh not only furnished the funds for the work and gave it the benefit of his own personal oversight, but from time to time helped it on with his own labour, shouldering the hod and carrying the cut stones and mortar for the use of the builders. But, like Remigius, he was not allowed to witness the consummation of his work. He died in 1200, having seen the completion only of the choir and eastern transepts and the commencement of the great transept.

The work was carried on continuously, though we have no documentary records of the progress of the work by his successors, William of Blois and Hugh of Wells, brother of Jocelin, bishop of Bath and Wells, who at the same time was building the cathedral of Wells. During the six-and-twenty years of the episcopate of this second Hugh (d. 1235) the nave and side aisles must have been built, the Galilee porch, chapter-house and vestry erected, and preparations made for the completion of the west front. This work consisted in the encasing and heightening of the stern Norman work of Remigius, niche-arcaded walls of the Early English style, the patent unreality of the upper portion of which—"a mere mask without the slightest honest expression"—may be forgiven for its wondrous beauty, and the skill with which the acknowledged difficulty of continuing work of various ages in one design was met and overcome. This work may be ascribed to the episcopate of Robert Grosstête, the peasant's son. It was during the episcopate of this great and good man that the central tower was rebuilt after its fall. The latest portion of the fabric of our minster—the unrivalled angel choir—was added between the years 1255 and 1281, in which latter year the wonder-working relics of the then canonised Hugh of Avalon were translated with great pomp, Edward I., Queen Eleanor, their royal children and many of the noblest and greatest in Church and State, attending the ceremony, to a shrine behind the reredos in this newly erected portion of the church, destined for its reception.

The cloisters, a beautiful example of the Decorated style, were added in the episcopate of Oliver Sutton, 1296; the upper part of the broad tower was raised under Bishop John of Dalderby, between 1307 and 1311; the west windows were put in and the western towers elevated by Treasurer John of Welbourne, who also gave the design for the choir stalls (1350-80 or very soon afterwards), and the work, as we see it, was fully completed by the addition of the charming little chantry chapels of Bishop Fleming (d. 1431), Bishop Russell, the chancellor of Edward IV., and the tutor of his ill-fated little son, Edward V. (d. 1493), and Bishop Longland (d. 1547). Defaced by the religious zeal, not always according to knowledge, of the Reformation; sacked by the Parliamentary soldiers in 1644; only rescued from threatened destruction by the civic worthy, Mr. Original Peart, Mayor in 1650, and M.P. in 1654-56, who represented to Cromwell that "if the minster were down Lincoln would soon be one of the worst towns in the country;" restored according to their lights by Bishop Fuller and Dean Honeywood, after the restoration of Monarch and Church—it has been reserved to the last and present year to disinter the buried fabric, to throw down the imprisoning palisade, and to exhibit its matchless proportions in their true beauty and dignity.

## THE CITY COMPANIES.

### 6. The Plumbers' Company.

THAT the Plumbers' Company had existence as a body from a very early period is shown by ordinances passed in the thirty-eighth year of the reign of King Edward III., 1365, of which the following is a translation:—

May it please the honourable men and wise, the Mayor, Recorder, and Aldermen of the City of London, to grant unto the plumbers of the same city the points that here follow:—

In the first place, that no one of the trade of plumbers shall meddle with works touching such trade within the said city, or take house or apprentices, or other workmen, in the same, if he be not free of the city; and that, by assent of the best and most skilled men in the said trade, testifying that he knows how well and lawfully to work, and to do his work; that so the said trade may not be scandalized, or the commonalty damaged and deceived, by folks who do not know their trade.

Also, that no one of the said trade shall take an apprentice for less than seven years; and that he shall have him enrolled within the first year, and at the end of his term shall make him take up his freedom, according to the usage of the said city.

Also, that every one of the trade shall do his work well and lawfully, and shall use lawful weights, as well in selling as in buying, without any deceit or evil intent against any one; and that for working a clove of lead for gutters, or for roofs of houses, he shall only take one halfpenny; and for working a clove for furnaces, *tappetroughes*, belfreys, and conduit pipes, one penny; and for the waste of a wey of lead when newly molten [he shall have an allowance of two cloves], as has been the usage heretofore.

Also, that no one for singular profit shall engross lead coming to the said city for sale, to the damage of the commonalty; but that all persons of the said trade, as well poor as rich, who may wish, shall be partners therein at their desire. And that no one, himself or by another, shall buy old lead that is on sale, or shall be, within the said city or without, to sell it again to the folks of the said trade, and enhance the price of lead, to the damage of all the commonalty.

Also, that no one of the said trade shall buy stripped lead of the assistants to tilers, *lagers*, or masons, or of women who cannot find warranty for the same. And if any shall do so, himself or by his servants, or if any one of them be found stealing lead, tin, or nails, in the place where he works, he shall be ousted from the said trade for ever, at the will and ordinance of the good folks of such trade.

Also, that no one of the said trade shall oust another from his work undertaken or begun, or shall take away his customers or his employers to his damage, by enticement through carpenters, masons, tilers, or other persons, as he would answer for the damage so inflicted, by good consideration of the masters of the said trade.

And if anyone shall be found guilty under any one of the Articles aforesaid, let him pay to the Chamber of the Guildhall, in London, for the first offence, 40 pence; for the second, half a mark; for the third, 20 shillings; and for the fourth, 10 pounds, or else forswear the trade.

It is believed that the only charter in existence relating to the company is one which was granted by King James I. in 1611. By it they were granted and declared to be for ever one body, corporate and politic, in deed, fact, and name, by the name of the "Master, Wardens, and Commonalty of the Freemen of the Mystery of Plumbing of the City of London," for the better ordering, rule, and government of the men of the mystery and company, and of all those who then exercised and used, or thereafter should exercise and use, the art and mystery of plumbing or the materials, works, merchandises, or things whatsoever to the said mystery relating, and for the utility, advantage, and relief of the good and honest, and for the terror and correction of the evil, deceitful, and dishonest.

The objects of the company, as set forth in the charter, may be generally stated to be to exercise a supervision of the interests and practice of the art and mystery of plumbing in the City of London and its suburbs, and the City of Westminster and its suburbs, and within three miles' compass thereof; to secure good workmanship



and the employment of the best materials in the trade, and to enforce the use of proper weights and measures in transactions of commerce. In the course of time, and by the effect of legislative changes, and substitution of iron and other metals for lead in the manufacture of weights and measures, the exercise of these functions may be said to have fallen into desuetude; but, with this limited exception, the company have always devoted their best energies to discharge the other and far more important duties devolving upon them by the charter—*i.e.* regulating the price of lead, the purity and commercial value of the solder, the character of workman employed in this important branch of the building trade, and the binding of apprentices.

The progress of sanitary service has demonstrated the important relations which the art of plumbing holds to the health, comfort, and social elevation of the people, and members of the company have accordingly taken a part in the efforts to promote technical education. In 1875 a committee was appointed "to inquire into and report how far technical education can be promoted among the workmen of the trade, and to ascertain the mode or modes by which it can be best attained. The following are among the conclusions of the committee:—

Our opinion is that any attempt on the part of the company to interfere with the workmen's societies or clubs will fail. No inducement which can be offered them will influence them to alter their rules, and unless these rules are altered we fear the company's efforts will be of very little use, and that the next thing to be considered is what is to be done in support of the apprenticeship system; that which at present exists is a system not only detrimental to the trade, but inasmuch as good plumbers' work in any building, whether public or private, is most essential to the comfort and health of the occupants, and indeed ultimately touches the question of public health, we are of opinion that it is desirable that an effort should be made to secure as far as possible a supply of properly-trained workmen.

For years past in London the apprenticeship system may be said to have fallen into desuetude, and instead of which labourers who, after having attended for two or three years on a plumber, get to know what they think enough of the trade, and just enough to impose upon those who know less. This class of labourers get employment by many builders to do work beyond their capacity, hence the many complaints of bad plumbers' work, not only in houses run up by speculative builders, but also those of a much better class, and unless something be done to check this the public health will drift into a very bad state. The real question being, How is this state of things to be altered or modified? We confess that the difficulties appear, if not insurmountable, such as require the most careful consideration.

Since that time the Plumbers' Company have directly co-operated with the City Guilds Institute, and have agreed to make an annual grant in its support, and have obtained a recognised place for plumbing among the industries which "the Institute" is designed to promote. An annual grant of 50*l.* out of the limited revenue of the company has also been made to the Institute.

The present number of freemen is believed to be about fifty, and the number of the livery is fifty. The qualification for membership is birthright, or apprenticeship, or purchase. Women are eligible. The fees payable for admission by patrimony, service, or act of Common Council, are 30*l.* 6*s.*; by redemption through apprenticeship, 13*l.* 8*s.* 6*d.*; and by ordinary redemption, 23*l.* 8*s.* 6*d.* The admissions of late years have been as follows:—1870, one by patrimony; 1871, nil; 1872, fourteen by redemption and two by patrimony; 1873, two by redemption; 1874, three by redemption; 1875, eight by redemption and one by servitude; 1876, two by redemption and two by patrimony; 1877, nil; 1878, two by redemption; 1879, nil; 1880, nil. In the ten years from 1870 to 1880 only four apprentices have been bound to members of the company.

The advantages incident to the position of a freeman were to enable him to carry on his art and mystery as a plumber within the City of London and the City of Westminster and the suburbs and liberties thereof, and within seven miles' compass thereof, without which he could not carry out such privilege, and when in adversity he is eligible to receive pecuniary aid, to be obtained either in a single amount, or spread over a term of quarterly payments or otherwise, as may appear most suitable to the governing body. This privilege extends to his widow and family. As a liveryman, the advantages are to vote for election of members of Parliament, and the further right of voting at all elections for the lord mayor and sheriffs of the City of London and Middlesex, and the officers thereof, namely, the chamberlain, the bridge masters, and of attending to record their opinions and votes at every common hall. Those of the master, wardens or other members of the governing body are precisely similar to those of the livery.

#### 7. The Tylers and Bricklayers' Company.

The origin of the Tylers and Bricklayers' Company, which ranks the thirty-seventh in the order of precedence, was in the necessity of providing some authority to which persons connected with the trade of tylers and bricklayers might resort for the better government, as regarded manufacture and work, apprenticeship, meeting of members, and the succour of those in old age and distress. The fellowship was governed and represented by the governing body of the company, who were called "the master and

custodes" or "warden of the fellowship," and who had been in the habit, time out of mind, of making divers ancient rules, ordinances, and orders for the conservation, rule, good order, and government of the "fellowship."

A charter of Queen Elizabeth, dated August 3, 1568, gave the master and wardens certain rights and privileges. Another charter, dated July 14, 1571, gave the master and wardens power to search and view bricks, tiles, and the materials whereof they are made, and to fine makers and holders of bad and imperfect bricks, tiles, and materials and work. This charter contains provisions as to the taking of apprentices, keeping order among the craft, powers to have a beadle—a clerk—to recover penalties, to appease controversies, to keep courts. It also contains provisions as to the several oaths to be taken by members of the company.

A charter of James I., dated April 20, 1604, incorporates the members of the company, gives them perpetual succession, with power to plead, to have a common seal, to choose a master and two wardens, to hold land, make rules and ordinances for the government of the company, to levy fines, to admit and expel members, to govern the freemen, and to punish for bad work and materials. This charter is dated from Gorambray.

A charter of James II., dated February 18, 1685, incorporates the company, gives perpetual succession, with power to have, purchase, receive, and possess land and goods and chattels, with power to plead, to have a common seal, to have master and warden, assistants and clerk; to have a common hall, to hold courts. The charter also contains provisions as to the mode of appointing the master, wardens, assistants, and other officers, also power to make by-laws, and to set and recover fines. It also contains provisions as to the binding of apprentices.

By the charters and ordinances the right is vested in the company exercising certain superintendence over and encouragement of the trades of bricklaying, brickmaking, and tiling. The local limit is London and fifteen miles around. The rights of search and condemnation of goods and of fine are not now exercised by the company, but the company continues to encourage and promote the well-being of its trade by means of the apprenticeship system, and also by bringing together men engaged in the trade, and by looking after its poor.

There are about ninety freemen, and seventy-eight liverymen. About forty members of the livery are connected with the building trade; most of the others are descended from persons connected with the trade. The qualifications for freedom are:—(a) Having been born free (patrimony). (b) Having served the usual seven years' apprenticeship to a freeman of the company (servitude). (c) By redemption or purchase. Women are admitted to the freedom. The fees payable to the company are:—(a) and (b) Patrimony and servitude, 2*l.* 2*s.* (c) Redemption, 21*l.* The qualification for livery is freedom. The fees payable to the company amount to 15*l.* Between 1870 and 1880 there have been two admissions to the freedom of the company through servitude, twenty-one through patrimony, and thirty-four through redemption. The admissions to the livery in the same period have been forty-nine. Since 1877 twelve boys have been bound apprentices by the Court to persons following the trade of bricklayers.

#### TIMBER SUPPLY.

A PAPER on "Past, Present, and Future Sources of the Timber Supplies of Great Britain" was read by Mr. P. L. Simmonds at a meeting of the Society of Arts on the 17th inst. The paper was one of those rewarded by the Committee of the Edinburgh Forestry Exhibition.

Mr. Simmonds said that the immense importance of the extraneous supply of wood to this country is proved by the magnitude of our imports as shown in the Board of Trade returns for the last two years. These exceeded 18,000,000*l.* in value, to say nothing of our home supply of wood. But there are other forest products imported of considerable value, which brings up the total value of forest products to over 31,500,000*l.*

Great Britain, in proportion to its size, is, perhaps, the largest consumer of wood in the world, and her demands are continually on the increase. In 1858, we received about 3,400,000 loads of foreign and colonial wood, of all kinds; last year (1883) we imported over 6,640,000 loads, or nearly double the quantity of a quarter of a century ago. Although the value of the forest products of the United Kingdom are said to exceed 3,000,000*l.* in value, yet our imports of wood are to nearly six times that amount—*viz.*, 17,742,660*l.* in 1883. In 1844, the whole quantity of timber imported into the United Kingdom was under 1,500,000 loads or tons, and the proportions of supply were one-third from foreign countries, and two-thirds from our Colonies. In 1854, the imports were just upon 2,500,000 loads, of which three-fifths came from our own possessions, and two-fifths from foreign countries. In 1883, out of 6,647,211 loads imported, only a little over 1,529,000 loads came from India and our Colonies.

We are living on a capital which is vanishing rapidly, and we certainly look with inquietude upon the prospects of the future. In Europe, Norway and Sweden have more than 177,000,000



acres covered with trees, mostly, however, of the common kinds as spruce, fir, pine, &c., and it is but lately that measures have been taken to replace the fellings near the ports, which have become bare of vegetation; it will take time to reap the benefits of this precaution. The total home consumption of Norway was estimated by Mr. Forest-master Scheen in 1884 at 11,481,000 cubic metres. The annual export of timber in the ten years ending 1882 averaged 900,000 tons. In 1881, the exports of timber from the Crown forests of Sweden reached a value of 1,506,883 kronors (80,382*l.*), the largest sum ever reached. The public and private forests amount to about 90,000,000 acres, and fifteen years, it is stated, will see these supplies very materially reduced.

Russia, with her 527,000,000 acres of woodland, exports no more timber than the Scandinavian countries, while no sound system of forestry has yet been attempted, except the recent introduction of a few foreign trees. About 3,000,000 tons of wood are annually consumed in St. Petersburg for firewood. Excepting in the north and north-east, Russia is poorer in forest than the rest of Western Europe. The principal local use of wood in Russia is for house building, for which purpose it is reckoned that 30,000,000 cubic feet are used annually, and these wooden houses must have to be frequently renewed, if the old saying is true that "Russia is burnt down every seven years." Another large employment of timber there is for ship and boat building. It is calculated that about 75,000 vessels of different sorts ply on the inland waters of the empire, of which about one-fourth are annually destroyed, so that about 15,000 must be built in the year to replace them. The value of the wood exported by land and sea in 1882 was 5,598,120*l.*, and that of wood used for fuel was estimated at 13,600,000*l.* Of the total output for 1880, of 2,911,162 cubic fathoms (seven feet), there was set down for timber and firewood about 617,000,000 cubic feet.

In an official report on Russian forests, recently submitted to the Foreign Office, it is stated that about 33 per cent. of the total area of the country may be reckoned to be forest. As compared with this, Austria has 29 per cent. of her area forest; Germany, 26 per cent.; France, 19 per cent.; Italy, 18 per cent.; and Turkey, 14 per cent. The amount of wood delivered from the forests of the Crown in Russia averages 600,000,000 cubic feet yearly. England takes 40 per cent. of the wood exported, and Germany 35 per cent., of which a good deal is in transit for England. Holland takes 10 per cent., and other countries smaller amounts.

Spain and Portugal, with 6,000,000 acres of woodland, contribute but little to the timber trade of the world; while France, with her 22,000,000 acres, can spare no wood, as she needs every bit for home consumption. Germany has 40,000,000 acres of woodland, and better care is taken for the maintenance of forests there than anywhere else, and the greatest quantity of the best European timber is produced there. Italy has about 7,000,000 acres of woodland, and exports excellent timber of the finest quality, but not largely.

Turkey and Greece, notwithstanding they have over 10,000,000 acres under forest cultivation, furnish scarcely any timber to the trade of the world. Switzerland and Belgium require more wood than they can produce. The woods and forests of Portugal cover an area of 650,000 acres, of which 600,000 belong to the State and 50,000 to municipalities; 460,000 acres are covered with pines, and 125,000 with oaks and chestnuts. The largest pine forest is that of Lieria, where the maritime pine abounds. Algeria, with a superficies of 14,000,000 hectares (about 30,000,000 acres), has one-tenth under forests, woods, and coppices.

The Austrian Empire is clothed with forests (some 45,000,000 acres), which annually furnish 17,000,000 of cubic cords of wood of all descriptions. In some provinces the country is almost wholly covered with trees. Unfortunately, the best kinds are yielded by the most mountainous districts, from whence the difficulty and cost of removal is very great. The wooded districts of Austria comprise 31.7 per cent. of the soil, and from the excellent quality of the timber they furnish to industry species the most varied. The average annual export, from 1872 to 1876, was 181,173 cubic metres of firewood, and 1,749,978 of woods of construction. In 1877, 295,452 cubic metres of the former, and 2,660,711 cubic metres of the latter. There are about 9,300 sawmills at work, 217 of these are worked by steam, 38 by steam and water, and 9,000 by hydraulic power. The timber sold and employed in the interior of Hungary has been valued at 2,500,000*l.*, and the quantity exported at about the same, of which half represents the expense of production, transport, &c.

The great importance of North America for the future timber supply of the world may be deduced from the fact that Canada possesses almost 1,000,000,000 acres of timber lands, and the United States nearly as much; while the whole surface of the European forests taken together only amounts to about 800,000,000 acres, or less than half of that of North America. But the United States, judging by the declared value of her exports of timber, cannot be looked upon for any continuous supply, the shipments for some few years past having become almost stationary at a little over 3,000,000*l.* sterling in value.

Nothing need here be said about the timber supply of Africa,

for of the forests of that continent we at present know but little, except the woods obtained from Algeria, the coast districts of Western Africa, and the South African colonies, which are very limited.

The Australian colonies at present contribute but small supplies to Europe, and the local demand for timber as the settlement progresses is increasing rapidly. The forests of the islands of the Eastern Archipelago will be principally utilised by Holland and Spain. British India and the other parts of Asia, however, furnish useful supplies of wood, and will contribute more as the forests are more easily reached by rivers and roads. The South American forests have as yet furnished but little timber to Europe, except small supplies from Mexico, Central America, and British Guiana. The magnificent forests of Brazil, with their large varieties of wood, have yet to be drawn upon, but at present are for the most part inaccessible to the wants of commerce. The only sources from which we draw our present supplies of timber are the Northern States of Europe, and the Dominion of Canada. From the United States and our different colonial possessions we can expect no supplies, or but very limited quantities; and it behoves, therefore, all timber-producing countries to husband their resources, and, by judicious forestry regulations, to prepare increased supplies for the future demands of the world. Dr. Lyons, M.P., who has recently given much attention to this subject, says:—"Other nations are making the remark that, standing prominent as England does as the largest importer of timber, to no other country is the forest problem of such importance. What with timber and the other great forest products, her imports amount in value to 20,000,000*l.* per annum, and it is not too much to say that not alone her maritime supremacy, but her position as a first-class Power in the world, depend on the forest supplies of these products, while her domestic industries would be hopelessly crippled if they were even temporarily suspended."



#### The Dome of St. Paul's.

SIR,—Mr. Armitage's words, which I made no pretence of quoting in my article, are of less significance than the fact of his condemnation of "the incubus of Mr. Stevens's design," garnished, indeed (as he recalls to my memory), with the customary compliment, but still a condemnation, and couched in terms which reminded me at least of the black cap.

Mr. Armitage must be allowed to know better than anyone else what he meant to say; but his hearers may also be permitted to believe the evidence of their own senses as to what his language conveyed to their minds.

I am, Sir, yours faithfully,

13 Mecklenburg Square:  
Dec. 20, 1884.

LEWIS F. DAY.

#### LEGAL.

##### Queen's Bench Division.

(Before Mr. JUSTICE MATHEW.)

SCOTT v. THE GREAT AND LITTLE CLIFTON SCHOOL BOARD.  
ARCHITECTS AND SCHOOL BOARDS.

The plaintiff in this case, an architect, sought to recover from the defendants, the School Board of the Great and Little Clifton district, a sum of about 90*l.* for services rendered in preparing plans for and superintending the erection of a school for the defendants. The case was tried before Mr. Justice Mathew, without a jury, at the July Assizes at Carlisle (see *The Architect*), when it was conceded by the defendants that the plaintiff had in fact executed the work, orders for which had been given him by the Board and had been agreed to by a resolution of the Board duly entered on their minutes; the defendants, however, refused to pay the plaintiff upon the sole ground that his appointment was not under the seal of the Board, and inasmuch as it related to work of above the value of 50*l.* was not binding upon the Board. The case came on upon further consideration on November 22, and was argued at some length, the defendants' counsel resting their case mainly upon the cases on the subject of contracts by corporations from "*Clark v. the Guardians of Cuckfield Union*," reported in 21, *Law Journal*, Queen's Bench, p. 349, down to "*Young v. the Corporation of Leamington*," reported in "*Law Reports*," 8, Appeal Cases, p. 518, in which it had been decided that corporations could avail themselves of a defence similar to that set up in the present case. Mr. Justice Mathew took time to consider his judgment.

His lordship gave judgment in favour of the plaintiff, and said that although it was true that by sec. 30 of 33 & 34 Vict. c. 73,



a School Board was made a body corporate, with perpetual successors and a common seal, yet the same statute contained further provisions with reference to its proceedings, and these would seem to render the cases relied on by the defendants inapplicable; and his lordship said that if it were necessary for the decision in this case he should hesitate to look upon those cases as a safe guide in cases like the present, where the contract was for a purpose incidental to the performance of the duties of the corporate body, such necessity having been evidenced by proof that the corporation had with full knowledge of its terms, and of all the facts, acted upon it, and taken the benefit of the performance. His lordship, however, held that the plaintiff was entitled to recover upon another ground, namely, that afforded by sub-sec. 6 of sec. 30 and rule 7 in the third schedule. By these it was provided that the appointment of any officer of the Board might be made by a minute of the Board signed by the chairman, and countersigned by the clerk of the Board, and that any appointment so made should be as valid as if it were made under the seal of the Board. The plaintiff had been so appointed architect to the Board, and the subsequent orders for the execution of the plans were given by the minutes of the Board properly signed, and his lordship was of opinion the plaintiff's appointment was within the meaning of that section that of an officer of the Board.

### NEW BUILDINGS.

**West Bromwich.**—The new Union Buildings, situate in Hallam Street, West Bromwich, have been formally opened. The total cost of the infirmary building is 12,447*l.* 3*s.* 2*d.* Accommodation is provided for 224 patients of three classes, namely, ordinary sick, 170; contagious cases, 44; and infectious cases, 10. The arrangement of the wards is upon what is known as the "pavilion" system. All the work has been completed for a sum more than 1,000*l.* less than the original estimate, which was 14,000*l.* Mr. William Henman, of Birmingham, prepared the plans, and twenty-two tenders were received for the work, and the lowest, that of Messrs. Stockton & Son, of Oldbury, for 10,800*l.*, was accepted. The contract for the boundary walling, railing, and gates was let to Mr. W. Bennett, of Sedgley, at 958*l.*; and that for the erection of the laundry was let to Mr. William Robinson, of Birmingham, for 3,570*l.*

### SCHOOL BUILDINGS.

**Blackburn.**—Extensions to St. Immanuel's schools, Cherry Tree, were opened on Saturday last by Mr. Alderman Whiteley, Mayor of Blackburn. The work has been carried out from the designs and under the supervision of Mr. James Bertwistle, M.S.A., F.S.I., architect.

**Little Hulton.**—Schools erected in connection with St. Paul's Church, Peel, Little Hulton, have been opened. The school has been built from the designs of Mr. R. Knill Freeman, F.R.I.B.A., of Bolton, and is Gothic in style, faced both internally and externally with patent bricks, and black and white timber framing of an ornamental character has been introduced in the gables and other parts. The schools are in the shape of the letter T, and consist of two large rooms, each 60 feet by 30 feet, one classroom 23 feet by 16 feet, and two rooms, each 21 feet by 14 feet. These latter rooms are separated from the schoolrooms by glazed screens, the screens between the two schools being also glazed and arranged so that they can be thrown together for public meetings. Large porches and lavatories are provided, and also heating cellar, &c. The contractors are Messrs. Coope Bros., of Farnworth. Accommodation is provided for 572 children.

### CHURCH BUILDING AND RESTORATION.

**Felton.**—The chancel of the ancient parish church of St. Michael has been reopened after restoration, carried out under the direction of Mr. Haswell, architect, North Shields. The contractors were Messrs. Dobson, West Thirston, and Mr. Richardson, Felton. The north-east wall has been almost entirely rebuilt, the foundations have been put right, while the whole of the chancel has been raised about 6 feet.

**Leek.**—The Primitive Methodist chapel and schools have been reopened after renovation. Among the improvements there is a vestry, with private stair, which can upon occasion be thrown into the chapel as a kind of small transept. Exclusive of this the total sittings are about 330 in the area, and some seventy more in the gallery. These alterations have been carried out by Messrs. Sugden & Son, architects. The builders were Mr. Herbert Hall, Mr. Wm. Knowles, and Mr. Isaac Heath.

**Wilton.**—A new vestry has been added to Wilton church and other improvements have been made. The vestry has been built by Mr. John Pearse, of Minehead, builder, from the plans and under the superintendence of Mr. Houghton Spencer, architect, of Taunton.

**Liverpool.**—An iron church has been opened, the erection of which was entrusted to and carried out by Messrs. E. F. Blakeley & Co., of 25 Hatton Garden, Liverpool.

### GENERAL.

**Mr. Whistler** is etching a plate of considerable size. The subject is, *One of London's Most Important Highways*. It will be published by Messrs. Dowdeswell.

**Signor Rossi**, the tragedian, has discovered in the Villa Medici at Florence a picture representing *A Prison in Granada*, which is attributed to Velasquez.

**Sir Frederick Leighton** has purchased a water-colour drawing, *The Sailor's Wedding*, by Mr. Hellward.

A Loan Exhibition of fine art, antiquities, and curiosities, promoted in Peterhead for the purpose of aiding the fund for providing better accommodation for the Arbuthnot Museum, has just been opened.

**Art Classes** are to be established at Romford.

**Norman Details**, showing interesting features of the original building, have come to light at Heybridge church, in consequence of stripping the heavy coatings of plaster.

**M. Albert Goupil**, of the late firm of Goupil et Cie, died last week in Paris, at the age of forty-four years.

The Foundation-stone of the Municipal Buildings at Schaerbeek has been laid. The contractors are MM. Mège & Snaps, whose tender amounted to 960,000 francs. The buildings are to be completed within three years.

The Paris Municipal Council have voted 2,000 francs to pay for opening a window in the church of St. Denis, Rue St. Louis-aux-Maraîs, in order that a better light may be thrown on the fresco by Eugène Delacroix.

Messrs. Thomas Lawrence & Sons, of Bracknell, supplied their well-known "B.L.B." rubbers and facing bricks for the whole of the work in Humphries Hall, recently illustrated in *The Architect*.

**Mr. T. J. Bailey** has been appointed successor to Mr. E. R. Robson, as architect to the London School Board. The salary is 600*l.* per annum, rising by annual increments of 100*l.* to a maximum of 900*l.*, and Mr. Bailey's whole time is to be given to the Board.

**Mr. Rhodes**, the borough surveyor, is to prepare designs for a public hall at Gravesend, to seat 1,000 persons.

**Mr. H. Boys**, brickmaker, Walsall, has announced his intention to give 2,000*l.*, conditionally on 7,000*l.* or 8,000*l.* more being raised, to build and endow twenty-one almshouses for the poor of the borough.

A Site has been obtained from Lady Cathcart for a new Roman Catholic chapel and chapter-house on the island of Eriskay, which lies in the Sound between Barra and South Uist. It was upon Eriskay that Prince Charles I. landed.

A Deputation of the Leeds Justices on Saturday visited some of the principal places of amusement in the town. In some instances the means of egress appeared to be quite satisfactory, and in other cases, where the justices found it necessary to make suggestions for increasing public safety, the proprietors expressed readiness to comply with every reasonable requirement.

**Mr. J. Perry** read a paper at the meeting of the York Architectural Association on Thursday evening last week, on "Classic Architecture and its Application to Modern Uses."

A Church is to be built and a new district formed for Scouthed, in the parish of Holy Trinity, Dobcross, Oldham.

The Annual Conversazione of the Bradford Technical College was held on Thursday and the following evenings last week.

The Canterbury Museum Committee held a meeting last week. The Rev. R. N. Gandy remarked that the reading-room accommodation was most inadequate, and what was wanted in Canterbury was that some gentleman should give 40,000*l.* or 50,000*l.* to build a new set of municipal buildings.

A Lake is to be formed in Southwark Park, the estimated cost of which is 2,490*l.*

The Directors of the National Provincial Bank of England (Limited), are about to rebuild their banking premises, at Deal, from the designs of their architect, Mr. Chas. R. Gribble, 11 Dean's Yard, Westminster. Mr. James Trollope, of Lower Walmer, is the contractor for the works.

The Temple Church will henceforth be open to visitors daily, Saturdays excepted, from ten to one o'clock and from two to four o'clock.

The Ruins of the Cour des Comptes, on the Quai d'Orsay, Paris, are to be removed. The site will be appropriated to the new Museum of Decorative Art, which is to be erected by subscriptions and the proceeds of lotteries. After thirty years the museum will revert to the State.

The Lower Thames Valley Main Sewerage Board on Saturday adopted a scheme of Sir Joseph Bazalgette for the disposal of the sewage of the combined district. The scheme proposes the total diversion of the sewage to land at Crossness. There will be pumping stations at Mortlake and Sutton. The cost is estimated at 563,711*l.*, which will be repaid in sixty years by a rate of 8-8*d.* in the pound.



# SUPPLEMENT

TO THE

# ARCHITECT

## CONTRACTS, COMPETITIONS, AND TENDERS.

LONDON, DECEMBER 27, 1884.

### TENDERS, ETC.

*As great disappointment is frequently expressed at the non-appearance of Contracts Open, Tenders, &c., it is particularly requested that information of this description be forwarded to the Office, 175 Strand, London, W.C., not later than 3 p.m. on Thursdays.*

*Correspondents, when writing to notify an extension of time, or an alteration of the date of sending in Competitions or Contracts, are requested in their letter of advice to write at the head of the required change—"Contract Supplement to THE ARCHITECT."*

### NOTICE TO THE PUBLIC.

By the Post Office arrangements THE ARCHITECT can now be sent to any part of the United Kingdom by an affixed Halfpenny stamp; hitherto the postage has very frequently been twopence per copy. The Publisher will be happy to forward, for 20s. per annum, post paid, THE ARCHITECT, to residents in towns and neighbourhoods to which there is no easy access by railway. Terms for the half-year, 10s.

### APPOINTMENTS VACANT.

**SODBURY.**—Jan. 12.—Applications are required for the Appointment of a Surveyor. Salary £300 per annum. Mr. J. Trenfield, Clerk to the Highway Board, Chipping Sodbury.

**KETTERING.**—Dec. 27.—Applications are required for the Appointment of a Surveyor for the District. Mr. Henry Lamb, Clerk to the Local Board, Kettering.

### COMPETITIONS OPEN.

**CHELSEA.**—Feb 25.—Plans are invited for Additions to the Vestry Hall. Premiums of 100, 50, and 30 guineas. Mr. J. Eisdell Salway, Clerk of the Vestry, King's Road, Chelsea.

**KING'S NORTON.**—Jan. 15.—Plans for the Erection of Four Cottage Homes upon Lands situate at Shenley Fields are required. Mr. Ralph Docker, Clerk of King's Norton Union, Colmore Row, Birmingham.

**KING'S NORTON.**—Jan. 15.—Plans are invited for the Erection of a Laundry, at the Workhouse, Selly Oak. Mr. Ralph Docker, 57 Colmore Row, Birmingham.

**NEWCASTLE-UNDER-LYME.**—Dec. 31.—The Corporation offer Premiums of 100 guineas, 30 guineas, and 20 guineas, for first, second, and third selected Designs for Public Baths, Free Library, and Assembly Room. Mr. James Pattison, Borough Surveyor, Newcastle-under-Lyme.

### CONTRACTS OPEN.

**ABERGAVERNNY.**—Jan. 6.—For Additions to Holy Trinity Church. Mr. Thomas Nicholson, Architect, Hereford.

**AKROYDON.**—Jan. 9.—For Building Seventeen Houses and Shop. Mr. James Farrar, Architect, Crossley Buildings, 29 Northgate, Halifax.

**BALBY WITH HEXTHORPE.**—Jan. 14.—For Furnishing and other Apparatus for Board School. Messrs. Wilson & Masters, Architects, Hartshead Chambers, Sheffield.

**BEDFORD.**—Jan. 6.—For Works in Connection with Construction of Service Reservoir, Filter Beds and Storage Tank. Mr. J. Lund, Borough Surveyor, Corn Exchange, Bedford.

**BERMONDSEY.**—Jan. 9.—For Additions, Machinery, and Engineering Works at Public Baths. Messrs. G. Elkington & Son, Architects, 95 Cannon Street, E.C.

**BEXHILL.**—Jan. 15.—For Enlarging and Part Rebuilding Church of St. Mark. Messrs. Riches & Esam, Architects, Station Road, Bexhill.

**BILLESDON.**—Jan. 2.—For Building Additional Vagrant Wards at the Workhouse. Mr. Bird, Surveyor, 16 Hummerstone Road, Leicester.

**BIRKENHEAD.**—Feb. 5.—For Supply and Erection of Two Pumping Engines, with Pumps and Steam Boiler, at Spring Hill Water Works. Mr. W. A. Richardson, Water Engineer, 50 Hamilton Square, Birkenhead.

**BIRMINGHAM.**—For Painting and Decoration at Bond Street Chapel and Building New Front, Shop and Dwelling. Mr. Evans, 83 High Street, Birmingham.

**BLAYDON-ON-TYNE.**—Jan. 8.—For Construction of Two Covered Service Reservoirs, &c., and Laying Cast-iron Pipes (13,800 yards), Supply of Cast-iron Pipes, Valves, Hydrants, &c. Mr. H. Laws, C.E., 18 Grainger Street West, Newcastle-on-Tyne.

**CANTERBURY.**—Dec. 30.—For Building Cellars, Malt Store, &c., and Removal of existing Buildings, Dane John Brewery. Messrs. Stopes & Co., Architects, 24A Southwark Street, S.E.

**CARLISLE.**—For Building Home for Incurables. Mr. G. D. Oliver, Architect, Carlisle.

**CHELSEA.**—Dec. 31.—For Building Sanitary Turret and Alteration to Old Offices, Arthur Street, for the Guardians. Messrs. A. & C. Harston, Architects, 15 Leadenhall Street, E.C.

**CROSS HILLS.**—Jan. 5.—For Extension of Hayfield Mills Premises, Glusburn. Messrs. Petty & Ives, Architects, Waterhouse Street, Halifax.

**CROYDON.**—Jan. 10.—For Supply of Furniture, &c., for the Guardians. Mr. Alfred G. Blake, Clerk, 15 George Street, Croydon.

**DERBY.**—Jan. 5.—For Alterations at County Court Offices. Drawings, &c., at the County Court Office, Derby. Mr. A. B. Mitford, Secretary, H.M. Office of Works, 12 Whitehall Place, S.W.

**ESTON.**—Dec. 31.—For Building Cottage at Cemetery. Mr. R. Moore, Architect, 7 Albert Road, Middlesbrough.

**EXETER.**—Dec. 29.—For Works and Alterations at Barnfield House for the Exeter Literary Society. Mr. James Jerman, Architect, 33 Paul Street, Exeter.

**EXETER.**—Jan. 6.—For Alterations and Additions to Homesteads on Barton Farm, Broadclyst, and Upton Farm, Clyst Saint Lawrence. Mr. C. E. Ware, Gandy Street Chambers, Exeter.

**FAREHAM.**—Jan. 5.—For Construction of Roads (1,865 yards) at Lee-on-the-Solent. Mr. E. A. Robinson, Victoria Hotel, Lee-on-the-Solent, Fareham, Hants.

**FARNHAM.**—Jan. 1.—For Rebuilding Plough Inn. Mr. S. Stapley, Architect, West Street, Farnham.

**FARNHAM.**—Jan. 5.—For Supplying Pair of Horizontal Steam Pumping Engines and Boilers. Mr. James Lemon, C.E., Palace Chambers, Westminster.

**FINCHLEY.**—Jan. 19.—For Supply of Guernsey and other Hand-broken Granite (2,300 tons). Mr. G. W. Brumell, Surveyor to the Local Board, Church End, Finchley.

**FYLDE.**—Dec. 30.—For Laying Cast-iron Water Main (12 miles), with Excavations, Carting, &c. Mr. Edward Garlick, Winckley Square, Preston.

**GAINSBOROUGH.**—Jan. 14.—For Sinking Bore Hole for Water Supply of Town. Mr. O. Greenhalgh, Surveyor, Chapel Staithe Offices, Gainsborough.

**GREENOCK.**—Jan. 5.—For Construction of Two Warehouses and Sheds (Brick and Iron, and Covered Way, Iron and Concrete), James Watt Dock. Mr. W. R. Kiniple, C.E., 17 West Blackhall Street, Greenock.

**GUIDE BRIDGE.**—Jan. 9.—For Constructing Footbridge and Subway at Railway Station. The Engineer, 28 London Road, Manchester.

**HALIFAX.**—Dec. 30.—For Removing Embankments and Walls of Reservoir, &c. The Borough Engineer, Town Hall, Halifax.

**HANWELL.**—Dec. 27.—For Construction of Pipe Drain (420 feet). Mr. Edward Monson, junr., Grosvenor House, The Vale, Acton, W.

**HARDINGSTONE.**—Jan. 19.—For Construction of Sewers, Tanks, Buildings and other Works in Connection. St. James's End. Messrs. Ingman & Sons, Surveyors, Hazlewood Road, Northampton.

**HERNE BAY.**—Jan. 13.—For Building Board Schools. Mr. Thomas W. Collard, Clerk to the Herne School Board, The Institute, Herne Bay.

**HUDDESFIELD.**—Dec. 30.—For Building House, Boundary Wall's, and Out Offices. Messrs. John Kirk & Sons, Architects, Huddersfield.

**IPSWICH.**—For Additions to Business Premises. Mr. E. F. Blisshop, Architect, 32 Museum Street, Ipswich.

**PRIMROSE & CO**  
CHURCH ST.  
SHEFFIELD.

**ECLIPSE** PATENT  
ROOF GLAZING

NO PUTTY, PAINT,  
ZINC OR OTHER  
PERISHABLE MATERIAL.

IN EXTENSIVE USE FOR RAILWAY STATIONS, MILLS, &c.  
NO OTHER GLAZING CAN BE WARRANTED INDESTRUCTIBLE.  
PRIZE MEDAL AWARDS; KENSINGTON, MANCHESTER, LIVERPOOL, DONCASTER 1882.3.  
THE ONLY GLAZING AWARD. INTERNATIONAL HEALTH EXHIBITION, 1884.



ISLEWORTH.—Dec. 30.—For Erection of Laundry Buildings at the Workhouse. Mr. Edward Monson, jun., Architect, Grosvenor House, The Vale, Acton, W.

KENDAL.—Dec. 30.—For Building Tower, Crosthwaite Church. Mr. J. Bintley, Architect, 7 Lowther Street, Kendal.

KNIGHTON.—Jan. 9.—For Construction of Brick Sewers (4,350 yards) and Pipe Sewers (13,200 yards) with Manholes, Lampholes, and Ventilators, Outfall Tanks, Pumping-houses, Engines and Pumps, Irrigation Area, Fencing Roads, Embankments, &c. Mr. E. L. Miles, Surveyor, Horsefair Street, Leicester.

LIVERPOOL.—For Concrete Flooring at the Zoo (1,300 yards super.). Messrs. W. Sugden & Son, Architects, Leek.

LONDON.—For Pulling Down Four Houses, Jermyn Street, and Purchase of Old Materials. The Secretary, St. James's Property Company, Limited, 207 Piccadilly, W.

LYNDHURST.—Jan. 13.—For Erection of Stone Walling (350 yards) to Enclose Burial Ground. Mr. George S. Coxwell, Solicitor, Lyndhurst.

MAIDSTONE.—Dec. 27.—For Laying Sewer, College Walk. Mr. E. Hoar, Local Board Office, Maidstone.

MIDLAND RAILWAY.—Jan. 2.—For Construction of Two Bridges over Railway at Lenton. Mr. A. A. Langley, Engineer, Midland Railway, Derby.

MIDLAND RAILWAY.—Jan. 2.—For Supply and Erection of Ironwork in Reconstruction of Two Bridges at Shipley and Four Bridges near Alfreton. Mr. A. A. Langley, Engineer, Midland Railway, Derby.

NATIONAL GALLERY.—Jan. 2.—For Building Picture Galleries, &c. Mr. A. B. Mitford, H.M. Office of Works, 12 Whitehall Place, S.W.

NELSON.—Dec. 27.—For Supplying Cast-iron Pipes (130 Tons). Mr. Samuel Holden, Waterworks Manager, Local Board Offices, Nelson.

PENDLETON.—Jan. 12.—For Construction of Railway from Pendleton to Hindley (13 miles 9 chains); Connecting Line at Agercroft (38 chains); and Connecting Line at Westhoughton (1 mile 30 chains). The Engineer, Hunt's Bank, Manchester.

PORTO RICO.—For Supplying Dredging Plant for Harbour. Mr. J. A. Infesta, 39 Piccadilly, Manchester.

PLYMOUTH.—Jan. 5.—For Building Cattedown Road Schools, Caretaker's Residence, &c. Mr. H. J. Snell, Architect, Courtenay Street, Plymouth.

PWLLHELI.—Jan. 1.—For Building Parish Church. Rev. D. Jones, Vicar, Pwllheli.

RUNCORN.—Jan. 6.—For Building Board Schools, Greenway Road, in Two Departments (207 Girls and mixed, 274 Children). Messrs. F. & G. Holme, Architects, 8 Westminster Chambers, Dale Street, Liverpool.

SHEERNESS.—Jan. 9.—For Reseating, Improving, and Enlarging of Holy Trinity Church. Mr. R. Wheeler, Architect, Tunbridge Wells.

SOUTHAMPTON.—Jan. 3.—For Works of Draining, Fencing, &c., in the Polygon. Mr. E. T. Howell, Surveyor, 6 Portland Street, Southampton.

SOUTHAMPTON.—Jan. 13.—For Improvement Works, Mordaunt Road. Mr. W. B. G. Bennett, Borough Surveyor, Southampton.

STOUGHTON.—Dec. 30.—For Building Board School. Mr. S. Welman, Architect, High Street, Guildford.

SWANSEA.—Dec. 29.—For Additions to Danygraig School. Mr. E. Sidney Hartland, 5 Rutland Street, Swansea.

SWANSEA.—Dec. 31.—For Construction of Stoneware Pipe Sewers (3,000 yards) and Cast-iron Pipes (750 yards) for Sewerage of Port Tennant. Mr. R. H. Wyrill, Borough Engineer, Guildhall, Swansea.

TARBERT.—For Providing and Laying Fireclay and Cast-iron Pipes for Water Supply from Loch Chaorunn, and Extension of existing Mains; also Constructing Filters and other Works, Providing and Laying Fireclay Pipes for Main and Branch Sewers, Cast-iron Pipes for Outfall, Constructing Manways, and other Works. Messrs. Niven & Haddin, C.E., 131 West Regent Street, Glasgow.

WALLSEND-ON-TYNE.—Jan. 12.—For Building School Rooms, &c., and Enlarging the Biddle Schools. Mr. T. Southron, Architect, 70 King Street, South Shields.

WANDSWORTH.—Dec. 30.—For Works of Painting and Cleaning, at the Infirmary of the Union. Mr. E. H. Taylor, Clerk, Union Offices, St. John's Hill, New Wandsworth.

WARRINGTON.—Dec. 29.—For Building Market Inspector's Office and Alterations to present Office. Mr. T. Longdin, Borough Surveyor, Town Hall, Warrington.

WESTMINSTER.—Jan. 7.—For Repairing Floor of Pipe Chambers of Laundry. Mr. H. Monson, Surveyor, St. James's Vestry Hall, Piccadilly.

WHITLEY.—For Supply of Drainage Pipes (1,250 yards). Mr. Henry Nield, Whitley, near Northwich.

WILLESDEN.—Jan. 6.—For Supply of Unclimbable Iron Fencing, Two Double Gates, and Three Single, &c. The Superintendent, Burial Board, Vestry Hall, Church End, Willesden.

## TENDERS.

## BANGOR.

For Building Biological Laboratory and Lecture-room in connection with the University College of North Wales, Bangor. Mr. RICHARD DAVIES, Architect, Bangor.

None of the Tenders accepted, being too high.

For Main Sewer Work, Barmouth. Mr. ROBERTS, Engineer.

Jones, Barmouth	£240	2	0
Davis, Pormadoc	200	10	0
OWEN (accepted)	150	0	0
Engineer's estimate	200	0	0

## BEDFORD.

For the Erection of Two Cottages at the Irrigation Farm, Bedford.

Haynes	£419	10	0
Melcombe	415	3	4
White	412	0	0
Harrison	389	0	0
Clayson & Co.	385	0	0
Corby & Son	375	0	0
Freshwater	374	5	0
Dennis	370	0	0
Smith	369	0	0
Pacey	365	10	0
Haynes	361	4	0
Laughton	357	0	0
Todd	344	0	0
CARTER (accepted)	337	10	0

## BORRISOKANE.

For Making Reservoir, Supplying, &c., for the Guardians of Borrisokane Union.

Simpson, Dublin	£580	0	0
Murphy, Nenagh	538	0	0
Swallow, Dublin	500	0	0
MAHER, Borrisoleigh (accepted)	500	0	0

## BRADFORD.

For Extension of Thornbury Mixed School, for the Bradford School Board.

MOULSON & SON (accepted)	£1,900	0	0
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## COLCHESTER.

For the Erection of a Pair of Cottages, East Donyland, for Miss M. E. Shave. Mr. J. W. START, Architect, Colchester.

GLADWELL, Colchester (accepted)	£203	0	0
(No Competition.)			

## EXETER.

For Building Business Premises, Exeter.

Moass & Son	£1,100	0	0
Sharland	1,075	0	0
Gooding	1,074	18	0
Gibbard	1,066	0	0
Scadding & Son	1,060	0	0
Stile	1,050	0	0
Sanford	1,038	0	0
Comings	1,000	0	0
Holmes	995	0	0
GRISON (accepted)	890	0	0

## HEYWOOD.

For the Excavating and Foundations for Fireproof Mill, at Broadfield, Heywood, for the New York Mill Company. Messrs. SVOTT & SONS, Architects, 4 Corporation Street, Manchester.

## Foundations.

DIGGLES BROS., Heywood (accepted).

## Cast Ironwork.

WALKER & HOCKING, Bury (accepted).

## KETTERING.

For Alterations at the Workhouse Infirmary, Kettering. Mr. GORCH, Architect.

Sharman	£37	0	0
C. & F. Henson	35	10	0
Neal	30	0	0
BARLOW (accepted)	29	10	0
Architect's Estimate	29	0	6

## LINCOLN.

For the Formation of Street on Building Land between the Union and Yarborough Road, Lincoln. Messrs. GODDARD & SON, Surveyors.

H. S. & W. Close	£210	0	0
Kirk	201	0	8
Copley	192	16	0
Dawson	171	15	0
Bradley	169	10	0
RUSH & SHEPHERD (accepted)	166	2	10

## LONDON.

For Repairs to Board School, George Street, Lambeth.

Della Rocca	£100	0	0
Nightingale	86	0	0
Mallett	58	0	0

For Re-erection of Iron Buildings for the School Board, Parrett Street.

Pitchford	£369	0	0
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For new Shop Front and Fittings at 147 Shoreditch, for Mr. Eaton Buck.

SHURMUR (accepted)	£225	0	0
(No Competition.)			

## LONDON—continued.

For Alterations at the Bell Public House, Middlesex Street, E., for Mr. W. Rose. Messrs. WILSON, SON, & ALDWICKLE, Architects.

SHURMUR (accepted).

No competition.

For Construction of Sewers for the Holborn Vestry. Killingback . . . . . £1,480 0 0  
Taylor . . . . . 1,890 0 0

The tender of Mr. Taylor, after being accepted, has been withdrawn. The tender of Mr. Killingback, the next lowest, has been accepted.

For Building Shops, Woodland Villas, Greenwich.

Hayward & Son	£245	0	0
Lee	889	14	0
Hollis	889	10	0
Holloway Bros.	889	0	0
J. Blow & Son	837	0	0
E. Blow	820	0	0

For Pulling Down and Rebuilding the Sir Sydney Smith, Chester Street, Kennington Road.

Hammond	£2,450	0	0
Canning & Mullins	2,347	0	0
Burnham & Son	2,245	0	0
Smith	2,157	0	0
Jackson & Todd	2,040	0	0
Beale	1,998	0	0

For Alterations to No. 22 Tottenham Court Road.

Craske	£2,041	0	0
Nightingale	2,010	0	0
Martin, Wells & Co.	1,980	0	0
Green	1,890	0	0
Axford	1,885	0	0
Patman & Fotheringham	1,800	0	0
Scharien & Williams	1,772	0	0
Stimpson & Co.	1,736	0	0
SCRIVENER & CO. (accepted)	1,707	0	0

For Bottling Stores, &c., for Messrs. J. A. Alabaster, Kingsland Road. Mr. F. J. SMITH, Architect.

Quantities by Mr. Walter Barnett.

Chessum	£1,542	0	0
Hayworth	1,374	0	0
Allard	1,300	0	0
Forest	1,287	0	0
Stimpson & Co.	1,249	0	0
Boyce	1,245	0	0
SHURMUR (accepted)	1,179	0	0

For Alterations, &c., to Premises, St. Andrew's Street, Holborn. Mr. F. J. SMITH, Architect. Quantities by Mr. Walter Barnett.

R. & G. Russell	£4,558	0	0
Hindle	4,473	0	0
W. & D. McGregor	4,400	0	0
Colls & Son	4,400	0	0
Stimpson & Co.	4,290	0	0
Burch & Co.	4,289	0	0
Scharien & Williams	4,250	0	0
Miller & Brown	4,129	0	0
Boyce	4,092	0	0
Richardson	4,017	0	0
SHURMUR (accepted)	3,978	0	0

For the Erection and Completion of the Leadenhall Market Extension, for the Honourable the Corporation of the City of London. Mr. HORACE JONES, Architect.

Quantities by Messrs. William Reddall & Son.

Nixon	£16,917	0	0
Corder	16,465	0	0
Hall & Beddall	16,430	0	0
Greenwood	16,273	0	0
Hart	16,206	0	0
Ashby Bros.	16,034	0	0
Perry & Co.	15,736	0	0
Holland & Hannen	15,647	0	0
Webster	15,580	0	0
Bywaters	15,460	0	0
Boyce	14,970	0	0
Chappell	14,960	0	0
Kilby & Gayford	14,889	0	0
Morter	14,563	0	0
Gentry	14,475	0	0
Mowlem & Co.	13,490	0	0

For Heating St. Joseph's Night Refuge, Dublin. BACON & CO., London (accepted).

For Heating Kinnoull Church, Perth, N.B. BACON & CO., London (accepted).

## LUTON.

For the Erection of Shop, &c., for Mr. S. Smith, Luton.

Saunders	£1,651	10	0
Redhouse	1,588	0	0
Neville	1,499	0	0
DUNHAM (accepted)	1,470	0	0

## NELSON.

For Erection of Weaving Shed, Nelson, for the Pendle Street Loom and Power Company. Mr. THOS. BELL, Architect, Burnley and Nelson. Quantities by the Architect.

Robinson, Nelson, mason.

Bertwistle, Padiham, joiner.

Roberts & Co., Nelson, ironfounder.

Rustworth Bros., Colne, millwright.

Roberts & Co., Nelson, engineer.

Shed supposed to be the largest in Lancashire, to contain 2,400 looms.

## PRESTON BROOK.

For Repairs, &c., at Aston Grange, Preston Brook, Cheshire. Messrs. LINAKER & DAVIES, Architects, Frodsham.

## General Repairs.

Stelfox & Carter, Northwich	£464	10	1
Davies, Frodsham	425	0	0
GLEAVE (executors of late John), Frodsham (accepted)	326	16	6

## Painting, &amp;c.

SPENCER, Frodsham (accepted)	59	15	0
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**RUNCORN.**

For Building Ward at Infectious Hospital, Runcorn.  
STATHAM (accepted) . . . . . £180 10 0

**SHEFFORD.**

For New Bar, Front, &c., to the New Inn, Shefford.  
Stapleton, Hitchin . . . . . £150 0 0  
Daniels, Clophill . . . . . 131 10 0  
Wootton, Shefford . . . . . 94 0 0  
White, Bedford (accepted) . . . . . 92 0 0  
Ransom, Arlsey . . . . . 70 0 0

**STOCKTON.**

For Street Improvement Works, South Stockton. Mr. THOROLD, Surveyor.  
Dixon, Eaglescliffe . . . . . £1,948 14 10  
Robinson, Stockton . . . . . 1,906 5 10  
Heathley, Stockton . . . . . 1,833 12 8  
Jones, Stockton . . . . . 1,881 13 1  
HUNT, Thornsby (accepted) . . . . . 1,833 17 3

**ST. IVES.**

For Board Schools, St. Ives, Hunts. Mr. EDWARD W. ROBB, Architect, St. Ives.

*Girls and Infants' Schools.*

Olderton, Cambridge . . . . . £990 0 0  
Lofts & Son, Ely . . . . . 986 0 0  
Hicks, Peterborough . . . . . 932 10 0  
Storey & Son, Bourn . . . . . 899 15 0  
Skeels & Sons, St. Ives . . . . . 897 0 0  
Willmott & Son, Cambridge . . . . . 886 18 0  
Wade, Edey & Son, St. Neots . . . . . 864 0 0  
Giddins, St. Ives . . . . . 842 0 0  
Feast & Waters, Haddenham . . . . . 830 0 0  
Bunting, Fenstanton . . . . . 830 0 0  
Page Bros., Buckden . . . . . 810 0 0  
Saint & Sons, St. Ives . . . . . 780 0 0  
Wills, Cambridge . . . . . 690 0 0

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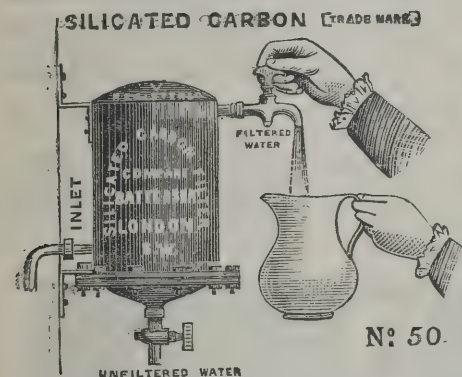
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